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ABSTRACT

This paper was designed to provide observational instruments and information about how to use them with future teachers or anyone interested in increasing sharpness of perspective in schools, churches, organizations (or any place where one person encounters another). Chapters discuss the following topics: (1) observation as a basis for quality living, (2) how to observe, (3) decision making behaviors as the focus of observation, (4) communication as the focus of observation, (5) involvement as the focus of observation, and (6) expanding observational prowess. Tables containing supportive materials are included. (JMB)

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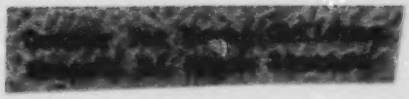

OBSERVATION:
Basis for Planning, Implementing and Evaluating

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PS 003464

College of Education
University of Maryland
College Park
1975

PREFACE

The Center for Young Children, a research unit of the University of Maryland, has been engaged for the past several years in a variety of research projects. Among them has been a group of related studies, one project sometimes emanating from the other, focussing upon the development of guidelines or instruments designed to describe what happens in classrooms or other settings. To see accurately and to use such information wisely should make for better human interaction and learning--wherever these activities take place.

The research projects have been conducted by faculty members, graduate students, and others working singly or in concert. Some studies are the result of doctoral dissertations, term papers, or faculty-student in-depth collaboration on educational topics or dilemmas. In all the instances reported in this Occasional Paper, some type of an observational instrument has been part of the study. In a few instances questionnaire techniques have been employed. It is these instruments or slight modifications of them with suggestions for use that are included in this booklet.

Basically, this work is written for the teacher-to-be or any other person concerned about increasing sharpness of perspective. The intent is that the observational instruments can be used in organizations, on city street corners, in drug stores, churches--any place in which one person encounters another--as well as in schools.

Appreciation is due the persons who conducted the initial studies. The chief investigator is credited in the appropriate sections. In this

Occasional Paper Diane Lee, former graduate assistant in the Center for Young Children, carried out the difficult task of attempting to put the observational guidelines developed for research purposes into a framework usable by anyone interested in sharpening his/her observational skills. Jessie Roderick, Associate Director and member of the Department of Early Childhood-Elementary Education, wrote the chapter on how to observe and the last chapter in which the reader is invited to extend the work of the Center section. The first chapter which builds a case for utilizing observation as an educational and human tool was written by me. The three authors worked closely and made many significant suggestions for each chapter in order to make the Occasional Paper a significant whole. It is the hope of the authors that persons using this document will gain new insights into themselves and others.

--Louise M. Berman, Professor
Director, Center for Young Children
Department of Administration,
Supervision, and Curriculum

August 1975

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CHAPTER ONE

OBSERVATION AS A BASIS FOR QUALITY LIVING

Eyes to see! Ears to hear! Obiously barring physical impediments most persons feel they can hear and see accurately, fully, and sensitively. Yet how frequently errors in judgment are made because one has acted upon incomplete, inaccurate, or tangential information relative to the phenomenon of concern.

Persons are continuously evaluting other persons. Judgments are made by parents, teachers, playground supervisors, classroom curriculum workers and many others based upon fragmented and less than objective information. Persons are capable of gathering information which is correct, concise and capable of being acted upon, or they can let their incomplete or inaccurate perceptions determine what they do to and with others. Obviously complete perceiving is not within the domain of persons. But we can learn to reach higher levels of this very critical human process.

All persons who have contact with or responsibility for others need to see persons and their settings just as fully, objectively, and completely as possible. Incomplete, slanted information or misconceptions are sure-fire ways of killing relationships. Inadequate or faulty ways of perceiving can also cause poor planning that may adversely affect the well-being of others. Fuller information enables persons to make more intelligent and satisfying decisions about self, others, and the relationship of each to each.

Persons can observe for a variety of purposes. The young mother is interested in whether the newborn's eyes seem to be recognizing her or not. The six-year old is intrigued with the squiggles of a snake he is trying to tame. The truant officer cautiously watches the youth released on parole. The couple seeking depth in their relationship look for non-vertal cues which give indications of the quality of the courtship. Every-day in settings of all kinds people look at things, at other persons, and at the total setting in order to get a better picture of themselves and of the unique self in harmony or disharmony with other persons and their environment.

To observe accurately and multi-dimensionally is critical if one is to make good decisions about one's self and others. Decisions are based upon information or data. If the individual has rich, varied perceptions from which to draw in making his decisions, provided he has built in adequate modes of valuing, the more likely he is to make good decisions.

Whether one is responsible for raising a family, for teaching, for supervising others, for serving as an aide or in some other paraprofessional capacity, or for working in a profession where service to others is crucial, adequate perceiving and subsequent decision making are crucial. How many times could a relationship have been enhanced rather than deterioriated if persons had taken the time for a good and careful look!

Preparation for Perceiving

People can see more accurately and more completely if they have had the opportunity to look at their worlds through varied colored lens. The intent of this book is to invite persons to observe through the utilization of various tools designed to enhance one's perception, and therefore one's knowlege of their world and its inhabitants. Seeing fully and richly enables

more effective and accurate communication, another process which binds person to person.

Through observation much can be learned about persons in settings. We can learn about those ideas and persons with whom the individual becomes involved. We can learn what seems to influence the decision making of the person. We can get information which might help us in our thinking and planning of next steps in our contacts with the person.

Persons can learn to observe more accurately and purposefully in multiple ways. By taking a camera and trying to catch unusual as well as usual shots, one begins to perceive more fully the world in which he lives. By individually recording what one sees in a setting and comparing one's perceptions with others' perceptions, the person can begin to ascertain where he is seeing things like other persons and where he is seeing them differently. By looking at a person in a setting through the categories or guidelines of some type of observational system, a number or parts of which are presented in this book, one can learn much.

After one has gathered information on data through any number of means, the person can generate hunches or hypotheses about next steps. Gaining information about what is actually happening is crucial to the one concerned about the welfare of others.

Who Observes

Since all persons are constantly seeking to refine their impressions by gathering new information, most persons who wish to acquire the skill of observing can do so. Purposeful observing involves the utilization of some form of an instrument whether it be a simple or more elaborate check list, a category system to be used with some specified direction, or rather open-

ended questions or columns which can be filled in at the discretion of the observer. These procedures provide one way of helping persons really see the world as objectively as possible. Sometimes certain kinds of training are necessary to utilize the instruments, but in this work, we have tried to introduce ways of observing that would keep training to a minimum. If one wishes to utilize the complete instruments contained in the text, then one would need to obtain the training materials from the various researchers whose work is included.*

Persons who might be interested in utilizing the material in this book for purposes of observing and ultimately making better decisions include parents, teachers, supervisors, elementary and secondary school children, persons preparing for any of the helping professions such as social work, counselling, etc., premedical students--in fact, anyone interested in the phenomenon of human behavior.

For example, elementary or secondary school children or youth might work in a group. Persons within the group might take turns gathering information about the behavior of other persons or one another. Supervisors may work in teams in order to record on a selected instrument what is happening in classrooms. The information may be far more objective than that often obtained in the supervisory act.

Nurses in training might note specific behaviors of patients in the process of preparing for an operation. Teachers might team with each other to gather information about a selected subject area or child. Parents can view their offspring with increased precision. Through observing and by offering relatively unbiased feedback to the persons involved, persons can

*A number of the training materials are included in the Center for Young Children Monographs and Occasional Papers. A list of which is included at the end of this document.

begin to see the impact of their behavior upon others.

Why Observe

The Importance of Gathering On-the-Spot Data

Most persons spend a large part of their lives in social interaction with others. Interaction takes place in a variety of contexts or settings. Persons' behaviors may be to a large degree influenced or shaped by the setting, say certain psychologists, yet other scholars of human nature hold that the person decides very selectively what he will incorporate from the setting and consequently the setting does not play as major a role in determining behavior as some may think. In any event, despite discrepancies about the degree to which behavior is influenced by context, we can be assured that at least the person makes some commitments, even if unconsciously, about the shaping influences upon his life. Therefore it behooves those of us who want to gain a clearer perspective of human behavior to utilize tools to understand it as clearly as possible.

Education can take place in almost every conceivable kind of context. Within the confines of families, schools, agencies, playgrounds, or churches, opportunities for education may be afforded. We know these institutions and groups educate but frequently we do not know precisely what individuals take from these settings. We may never have such knowledge but we can know even a bit more than we now do. We can gather more on-the-spot data in order to help us make wiser on-the-spot decisions.

We all know the problems created when children and all people regardless of age congregate in gathering places where life in the settings has little meaning for the participants. Life in classrooms has frequently been described as sterile and the mode of educating unrelated to the needs, backgrounds, and desires of those who frequent them.

Well-intentioned leaders of senior citizen groups may not reach the core longings of those persons who are to be served because the teachers have been unable to glean accurate information about the persons they serve. Lack of objective feedback can cause the best laid plans to fail. Day care centers may provide clean healthful care to those on their premises but may not challenge the budding minds and full hearts of those in attendance. In any type of setting, the individual, through gathering first-hand information about what is transpiring and then acting upon that information, can make the context more real, vital, and supportive to the person being served.

Individual and Institutional Compatibility

Through the use of observational techniques, an institution or organization can determine whether what is happening in the setting is congruent with the intent of the organization. Ascertaining congruency between purpose and intent is one way of evaluating an institution. For example, various kinds of schools have different purposes. If one were to explore the school and look at the behaviors of individuals within it, would these behaviors be congruent with the intent of the organization? Or are the behaviors entirely out of line with the intent of the school? If incongruency maintains, then the school needs to look carefully at its purposes. Do they need to be revised? Do teachers need help in more adequate implementation? Or are more points of entry needed so that children and youth see and accept the purposes of the institution in which they are involved?

Since no one can see within the mind of another, no institution can ever fully understand the individuals it serves. Each individual comes with his own hurts, desires, loves, pieces of knowledge, perceptual frame-

works, dislikes, anxieties, and competences. Yet schools, social agencies and other groups concerned about persons frequently design their programs as if each person were coming with the same intellectual equipment, aspirations, and involvements. It is the lack of attention to the idiosyncratic internal workings of persons that makes the most well-oiled institution with the most profound statement of purposes operate less than adequately.

By capturing on-the-spot information about persons, we can foster individuality and societal goals simultaneously in any situation. Democratic societies are neither totally individualistic nor totally predetermined and bound. It is the interplay of the rules of the culture with the idiosyncratic tendencies of individuals within the culture that keeps societies dynamic and attuned to the individuals within them. It is the sensitive looking at and listening to the sounds of the culture and the individuals within it that enables change to come about in peaceful, fruitful, and useful ways. We can all cite incidents where the lack of interplay between the individual and his culture have caused disharmonies to occur to the individual and the society.

Unfortunately in our haste to teach, to get something across to change another, we fail to gather basic information about the person. When we do gather basic information, frequently inadequate attention is given to its analysis and interpretations. The person is such a complex phenomenon that unless we are willing to struggle with recording his complex as well as his simplistic aspects, we treat the person as though he is less than human, as though simple cause-effect relationships govern his behavior. If we accept the assumptions that such is not the case, then it behooves all persons concerned about bettering the lot of others to learn to observe carefully

and to utilize the relatively unbiased results of observations in planning for the well-being of others.

Objective Observations as a Basis for Planning Activities

Many persons have responsibility for planning for the activities of other individuals. This planning can take place in a vacuum with little knowledge of how the person goes about his work, the degree to which he involves himself in his tasks, or the behaviors the individual exhibits as he makes his decisions. But most persons can plan activities which will make a difference in the lives of others. By building upon such information as: Which persons tend to be together much of the time, which individuals do not seem to seek the company of others, which individuals seem to engage in activities for extended periods of time, what ideas seem to be of interest to given individuals, the person planning for and with others can utilize information which may make activities lively and growth-producing.

Possible Observational Foci

For purposes of learning to observe more closely some suggestions are given in the next section on how to observe more closely. Since decision making, communicating, and becoming involved are critical elements of living, focus is upon these three processes. Obviously purposeful observing could focus on many other areas and skills of living.

Involvement has been selected for a possible focus because a person's involvements and commitments--those things to which he devotes time and energy--reflect much about the person. We can infer motivations and aspirations. Such information enables those who plan for the well-being of the person to develop activities with the person to lead him into greater depth in his involvements or to open up other courses of action if such seems

the wiser way to proceed.

Communicating is selected as a process to study since it is an overt process and the core of human interaction. We can see persons in the act of communicating, both verbally and nonverbally. Communicating requires less inferential leaps than certain other processes and is therefore a good place to sharpen observational skills.

Decision making is critical to all relationships and to all aspects of living. The parent needs to decide when to let a child tackle a job alone and when to intervene. The teacher must decide when to introduce new material to a student and even the nature of the material. The person attempting to help another who has a severe personal problem needs to decide the appropriate kinds of assistance to give to a person sunk in an abyss of despair. No person is exempt from the act of deciding--deciding both his own well-being and that of others. Yet, how little we observe and study the process of decision making.

Summary and Looking Ahead

In summary, a case has been made that data are generated in a variety of settings. Persons involved in helping relationships with others can use these data to see whether individual behavior and institutional goals are compatible. Gathering on-the-spot information enables institutions to change in a systematic fashion while simultaneously catering to the common and idiosyncratic goals and behaviors of individuals served by the organization--be it a home, school, or other type of agency. It enables more adequate planning for activities in which persons may participate. The chapter which follows deals with how to observe.

Because of the pertinence of decision making, communication, and involvement to human behavior, the focus of the bulk of this work is on observational techniques that enable a better understanding of these critical human functions. In conclusion, attention is given to expanding one's skill in the complex act of observing and dealing with the information one gathers.

CHAPTER TWO

HOW OBSERVE

In the chapters which follow, selected observational instruments and guidelines are discussed in terms of their purpose and past use, directions for using, examination of the information gathered, questions that might be answered by employing the guides, and suggestions for modifying them. However, since mere availability of an observation guide is not enough, ideas for selecting instruments for use in specific situations are presented in this chapter.

Selecting an Observational Guide

When a photographer decides to capture a glimpse of life, he may proceed in two ways. He can identify a specific subject or object to photograph, or he may cruise the terrain so to speak until a composition strikes him as the target for his skill. In either case, he must be knowledgable about and have skill in employing the equipment which results in the best photograph according to his established purpose. Likewise, the person who wishes to employ data-generating instruments or guides must first establish his/her purpose for using them and then select guides or instruments that make it possible to accomplish the purpose.

Purposes for Generating Information

It is important to determine what we are trying to accomplish or facilitate by generating information about persons as they interact with settings or contexts. Are we looking for answers to specific questions such as: What personal elements in the classroom setting appear to influence when students make decisions? or, How often do certain children change activities

during a free-choice period? Answers to such questions can help teachers make better decisions about planning for and with individuals and about the role of significant others in a setting.

Another purpose for using observational guides is to raise questions or to generate hunches. Although our initial purpose might be to obtain answers to specific questions such as those above, additional questions and concerns can emerge as we examine the information obtained. Why did certain students change activities frequently in a short period? What might happen if changes are made in the placement or number of materials or the timing of activities? Question-raising is a significant and fruitful reason for generating information about personal interactions within a setting

We can also view purpose in terms of a designated focus such as a personal process or elements of context. Is interpersonal communication, both verbal and nonverbal, the major focus of our efforts? Communication between mother and child may be the focal point of a study of interactions in the home. The materials or equipment used most in a setting such as a print shop may be the focus of data gathering for a shop teacher. In this publication we have selected to focus on the processes of decision, communication, and involvement.

In summary, purposes for generating information are many, and they can be viewed from different perspectives. The purposes for which the instruments in this volume were designed and used vary according to the persons responsible for developing and using them and the context in which these persons functioned.

Criteria for Selecting Guides or Instruments

Once a purpose for generating information has been established, one or several techniques for achieving the purpose are selected. In order to fulfill

a purpose, the instrument selected must be congruent with the goals. For example, if a major goal in generating data is to record personal interactions in different settings, the instrument or guide must include directions for describing or coding the various elements of context over time. Achieving a match between purpose and technique can be obtained by becoming aware of and applying certain criteria for judging and selecting an instrument.

The criteria or questions selected for discussion relate to the following concerns: statement of purpose, nature of categories, directions, suggestions for organizing and using data, context, reliability, validity, and inference. One might consider other criteria, but these appear appropriate to the content of this manuscript.[1]

Statement of purpose. Is the purpose of the instrument clearly stated in the title or in any descriptive material accompanying the guide? Initial inspection should indicate whether or not use of the instrument should be pursued in depth.

Nature of categories. Are the categories or questions self-explanatory or clearly and precisely defined and appropriate examples or illustrative behaviors included? Are categories free of overlap so that only one behavior or observation unit belongs in one and only one category?

Directions for utilizing instrument. Unless clear directions for use are given, an instrument or set of guidelines may be less than helpful. Before

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[1] For a broader coverage of criteria see John Herbert and Carol Attridge, "A Guide for Developers and Users of Observation Systems and Manuals," American Educational Research Journal (Winter 1975), Volume 12, No. 1, pp. 1-20.

deciding upon an instrument, the person may want to consider several questions such as the following: Are materials needed listed? Is the time necessary for utilizing the instrument described? Are training instructions included? Are they specific enough? If training protocols were developed for this purpose, are they described or information given as to how they might be obtained?

Suggestions for organizing and using information. Is there some indication of what information will be obtained as a result of using the instrument? For instance, a narrative accompanying a communication instrument would indicate that using the instrument enables a person to enumerate the number of gestures and facial expressions exhibited by two persons interacting with each other during a ten-minute period. Does the narrative include suggestions for organizing the data both during the data collection and afterward for purposes of summarizing, displaying, and communicating it to others? Tally or coding sheets, summary tables, charts, graphs, histograms, and time lines are examples of organization and display techniques.

Context. Does the instrument lend itself to being used in a variety of contexts? If so, are the instructions for such use given? If it is necessary to note elements of context, is this clearly stated? Is the guide utilized best in a setting where there is little movement among persons? Has it been constructed to describe designated interactions such as those that occur in a classroom where large group instruction by one person is generally the case? Or, perhaps a setting where instruction is given by machine? Or, is the context one in which student input is encouraged and prized?

Instruments vary not only in the amount and kind of contextual information noted but in how the information is used. Often, the more complex the

behaviors or processes observed, the more important context is to understanding them.

Reliability and validity. For more formal and extended use, reliability and validity information should be given. Does the instrument describe or measure what it was designed to do and does it do so consistently? Are procedures used in determining reliability and validity described? The degree to which these issues are dealt with often depends on the developmental stage of the instrument as well as the purpose for which it was designed and the suggested uses.[2]

Inference. Do the directions and other descriptive material accompanying the instrument or guide give some indication of the degree of inference required in using the instrument or parts of it? A rather high degree of inference can be required to judge whether a teacher's behavior can be categorized as facilitative. Generally, it is desirable to keep the degree of inference as low as possible, but in certain settings and for certain foci the inference level may of necessity be higher. Groundrules and carefully defined categories and directions are helpful in understanding and handling inference.

Decision, Communication, and Involvement: Selected Instruments and Category Groupings

The instruments and category groups presented in this paper were developed as part of the research thrust of the Center for Young Children from 1968-1975. They were utilized by faculty and students in the Center classrooms and in other school settings with age groups and teachers from pre-school through college.

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[2]Information on reliability or inter-observer agreement for instruments is in the individual Center for Young Children Monographs and Occasional Papers.

The purpose of these instruments and guides is mainly to describe personal interactions related to the processes of decision, communication, and involvement. As a result of describing behaviors related to these processes, teachers, students, parents, community workers, and those in other helping professions are better equipped to make decisions about what transpires in their respective settings.

The intricacies and continuity of personal interaction, the changes, patterns, and the unexpected can be described and subsequently contribute to our understanding of the person. The complexity of these observations is further increased by the need to look at the context in which interactions occur. As a result, at times there might be more inference on the part of the observer, but the richness of data or information thus achieved can outweigh any negative effects of occasionally higher degrees of inference.

The development of the instruments and guides proceeded from recording in diary-fashion behaviors observed in the classroom setting to deriving categories and directions for coding. When reliability was achieved, it was on the basis of inter-coder agreement. Specifics related to reliability are found in the Occasional Papers and Monographs on each of the instruments. Readers are encouraged to pursue reliability and validity in further uses of the instruments when appropriate to their purposes.

The guides and instruments which follow are primarily observational in nature although some include interview or reflective techniques. When the complete instrument is not included in the body of the text, it is found in the Appendix.

CHAPTER THREE

DECISION:

Focus for Observation I

Importance of Decision Making

The first set of observation guides focus on the development of tools for gathering meaningful information in the area of decision making. Perhaps today, even more than in the past, the ability to make significant decisions is critical. In this "age of accountability," indivtduals are charged with responsibility for their practical, moral,and ethical decisions. How do people face the challenge of sifting through choices, of evaluating and distinguishing alternatives? How do people weigh the probable consequences of each viable course of action? How can we, as parents, teachers, supervisors, or persons in any area facilitate or modify the development of the decision making process? Are opportunities for significant decisions offered in the home, classroom, or office? Can decision making be built into the general environment and the curriculum, and if so, do opportunities for decision change the behavior of the persons involved? What alternatives are chosen by persons who are given choices? Is there a consistent pattern of choice? A great deal has been written about this area in a theoretical framework, but seldom does the literature specify realistic ways to answer questions objectively. One possible reason for this deficiency is that the tools for describing behaviors and for prescribing changes have not been readily available. The following instruments were designed to help meet this need.

A. A Checklist for Decisions Related to Materials and Activities[3]

The Materials and Activities Observation Checklist (Figure 1) focuses on the activities and materials that are chosen or ignored by children when they are encouraged to make decisions relative to these matters in the classroom. Use of the instrument also enables an observer to identify the persons involved with the child during the period of observation and the amount of time each child spends at chosen activities. It consists of 17 categories of activities and materials typically found in preschool classrooms.

The Materials and Activities Observation Checklist was used at the Center for Young Children by the teachers and student teachers during classtime in the classroom and by single observers who gathered the data from a one-way screened booth adjacent to the classroom.

At another time, the checklist was used along with a detailed anecdotal record that included additional information regarding who initiated participation in an activity, the exact length of time a child spent at an activity, and a verbatim record of the child's interactions. The information gathered from this series of observations was used in analyzing the relationship between decision making and the following six factors: ability to predict outcomes, awareness of alternatives, willingness to take risks, maturity, anxiety, and self-concept.[4]

The two studies summarized vary in terms of the complexity of the research design and the analysis of the data. This point is made to highlight the versatility of the instrument.

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[3]See Sandra Horowitz, Decision Making in Young Children: A Report of Research Findings, Part One, Monograph 2, 1971.

[4]See Joan Poultney, Decision Making in Young Children: A Report of Research Findings, Part Two, Monograph 3, 1970.

The Materials and Activities Observation Checklist and Directions

The Materials and Activities Observation Checklist with sample codings follows.

Figure 1. Materials and Activities Observation Checklist

Child's Name _____ Sex _____ Date of Birth _____
Child's Number _____ Teacher _____ Date of Observation _____
Observer's Name _____
Observation Time _____
Which Observation:
1st ____ 2nd ____ 3rd ____

Other Person Code:
T-Teacher ST-Student Teacher
P-Parent O-Other
C-Child G-Group

Activities/Materials	Minutes of Observation									
	1	2	3	4	5	6	7	8	9	10
Animals (live)										
Art Materials (scissors, crayons, etc.)										
Airplanes-Trucks			✓ C	✓ C	✓ C					
Blocks	✓ G	✓ G								
Books										
Climbing Ladder Box										
Dramatic Play										
Easels (Paint)										
Games										
Housekeeping Corner										
Music										
Play Dough										
Puppets										
Puzzles										
Rocking Boat										
Tables (including water, sand)										
"Watching"										
Other										

Following are directions for using the Materials and Activities Observation Checklist:

1. Provide background information requested at the top of the Checklist.*

2. When a child observed is involved in a given category such as blocks, place a check (✓) in the appropriate block. A check in the activity/material row should be coordinated with the appropriate minute column.

3. To note persons with whom a child is interacting, write in the appropriate blocks the single or double letter abbreviation (i.e., T for Teacher) designated at the top of the Checklist.

If a child is observed playing with blocks along with three other children for the first two consecutive minutes and then begins to ride on a truck with another child for the next three consecutive minutes, the Materials and Activities Checklist would be filled in as shown in Figure 1.

Examining the Information Gathered

After observing over a period of time, the data should be examined in accordance with the particular situation and interests of the observer. The information gathered on the Checklist provides a shorthand description of the child's behavior in the form of the number of times choices occurred. This is a frequency count of choices of activities or materials and the other persons with whom the child interacted. After examining the information on the Checklist, a person might summarize the information using a form similar to the following:

*Records that are kept by a teacher for use in the school setting may bear the child's name. If use of the records goes beyond the classroom, numbers should be assigned the children and recorded in the appropriate space. In the latter case, guidelines for research involving persons should be followed.

Summary of Activities and Persons Selected

I	II	III	
Child's Name or Number	Activities/Materials	Person(s) With Whom Child Interacted	
		Person	Frequency
	Animals (live) ____ Art materials ____		

In Column II record the number of times each activity/material was chosen. In Column III record the code for the person with whom the child interacted and the number of times they interacted. Slashes may be used to obtain a frequency count.

The information gathered by using the Checklist can be used in several ways. For instance, if certain activities were never chosen by the students during free choice time, curriculum revision probably is necessary. If a child chooses to play with only one or two materials exclusively, then the teacher may want to find new ways to broaden the child's participation. The data might reveal that the person being observed only interacts with one teacher even though instruction is in the form of team teaching. The findings may support or refute the hunches of the observer or reveal an unexpected trend. Conclusions based on relatively objective data are significantly more meaningful and are easier to justify than are those which are based merely on conjecture.

If the observer wishes to do a time study, the data can be examined by

recording the number of observed Activities/Materials chosen during the first observation and then the number observed during the second and any subsequent observations. A column to note the difference could be added.

Choices Over Time

Child's Name or Number	Number of Activities/ Materials Chosen During Observation One	Number of Activities/ Materials Chosen During Observation Two	Changes

If more specific information is desired for purpose of planning, the particular Activities/Materials chosen by each child during each observation could be listed with the number of times they were chosen.

Specific Choices at Different Times

Child's Name or Number	Choices and Number of Times Chosen During Observation One	Choices and Number of Times Chosen During Observation Two
	Animals _____ Airplanes-Trucks _____ (record in the blanks the number of times each was chosen)	Art Materials _____ Easels _____

This guide may be used by teachers, student teachers, and teacher aides in the classroom during any convenient hour of the day on a daily basis throughout the entire school year. Practice in using the Checklist is

encouraged in order to familiarize the observer with the coding system and the presented order of activities.

Additional Questions

Are there consistent choices in the child's selection of activities and/or playmates?

Can meaningful patterns of choice be defined?

Is the child typically involved in solitary, parallel, or group play?

Who or what activities are consistently omitted?

Does the focus of a child's social interaction change over time?

How are choices affected by the presence or absence of teachers, peers, strangers, or parents at a given interest area?

What is the range of activities chosen by an individual?

Are the chosen activities related in some categorical way?

Is there a relationship between the activities chosen and the age or sex of the students?

Are there particular activities chosen at different time slots during the day?

Is there a relation between the child's mastery of an activity as determined by the teacher or other tests and the duration of interaction or the frequency of choice?

Possible Modifications

Instead of recording for 10 one-minute intervals, the observer may wish to substitute different time intervals. For instance, if the child being observed appears to have a very short attention span, the intervals might be more appropriate if they were altered to 30 seconds. An observer might find it more practical to use longer time slots such as 10 ten-minute intervals. On the other hand, the observer may wish to just note how much

time has passed between changes in activity.

The actual list of materials and activities could be changed to meet the interests of the observer and the characteristics of the population being observed. For example, if the population were sixth-graders in an open setting the list might include the following:

reading a text
reading a library book
solving math problems
conducting a science experiment
working at the language lab with the
tape recorder

The observer can just replace the activities given in the example with those that are better suited for the particular setting and persons.

B. Decision Making Interview Guide[5]

This guide was specifically designed to explore the following three questions: Is the young child able to state verbally realistic alternatives available to her/him in a preschool setting? Is the child able to make a choice from the list of alternatives mentioned? Does the child then carry out the announced choice? A combined interview and observation technique was used for this study.

Past Use

This guide was one of three instruments used in a longitudinal study conducted at the Center for Young Children. The focus of the research centered upon the decision making process of three-, four-, and five-year old children who attended the Center. Each child was interviewed by the teacher on six separate occasions just prior to the scheduled outdoor activity period during the months of October to December.

The Decision Making Interview Guide and Directions

The Decision Making Interview Guide which includes space for recording follow-up observations is shown in Figure 2.

Figure 2. Decision Making Interview Guide

Child's Name or Number _____ Sex _____ Date of Birth _____

Teacher _____

Date of Interview and Observation _____

Observer's Name _____

Other person code:
T-Teacher
P-Parent
C-Child
ST-Student Teacher
O-Other
G-Group

[5]See Sandra Horowitz, Decision Making in Young Children: A Report of Research Findings: Part One, Monograph 2, 1971.

Observation Date _____

Observation Time from _____ to _____

Which Observation 1st _____ 2nd _____ 3rd _____

I. Teacher: What could you do outside today?

Child Response:

Plan A: If child names some activity(ies) go on to question II.

Plan B: If child says, "I don't know" or makes no response, the teacher will verbally list four (4) possible choices and then ask question II.

II. Teacher: What are you going to do first?

Child Response:

III. Observe what child does first minute on playground.

Record:

Following are the directions for using the Decision Making Inverview Guide:

1) Provide the background information at top of guide.

2) Approach each child before she/he is to leave the room for the outdoor activity period. Tell the child that you would like to ask her/him some question before she/he goes outside.

3) Ask the child the first question. Jot down the necessary key words in the available space. When the interview is over, add the words that would complete the child's thoughts. For example, the child's response to "What could you do outside today?" could be recorded as follows:

"I could swing."

"Ride a tricycle."

"I want to run."

"Play with Johnny on the monkey bars."

The underlined sections are the words that were added following the interview.

4) If the child names an activity, proceed to question two and record the child's response.

5) If the child says, "I don't know" or fails to respond, list four possible choices. Next ask question two again and record the response.

6) Follow the child outside and observe him for the first minute of outdoor play.

7) Record in diary fashion what the child does and with whom she/he shares the experience. Letter abbreviations standing for other persons may be used in this diary fashion recording. (See Other Person Codes listed at top of guide format.)

Examining the Information Gathered

The information obtained by interviewing and observing the children can be arranged in tabular form in various ways depending upon how the information is to be used.

A table can be designed to show the number of choices stated by each child and the number of times the child followed through with the first choice given.

Child	Number of Choices	First Choice	Number of Times Followed Through on First Choice
1.			
2.			
3.			

A table can also be made that lists or describes the activities stated as alternatives by each child and the activity(ies) the child participated in during the observation period.

Child	Activity(ies) Stated	Activity(ies) Involved In
1.		
2.		
3.		
4.		

The data can be analyzed by making a list of all activities mentioned by all the children. Next, the number of times the activity was stated as a possible choice can be listed. Then the number of times the activity was actually used during the observation intervals can be tallied. In the last column, compute the difference between the number of times the activity was stated and the number of times it was actually used. A sample follows.

Activity	Number of Times Stated	Number of Times Used	Difference
Swing	5	4	1
Ride a tricycle	2	2	0
Play on the monkey bars	3	0	3

Additional Questions

Does a relation exist between the ability to state choices verbally and the age, sex, or language skills of children?

When children state an alternative, do they include other persons with whom they would like to share the experience? If a person is mentioned, does his or her presence or absence at the stated activity alter the behavioral follow through of that child? For instance, if a child mentions a person and that person is engaged in an activity other than the one named by the child, will the child go where the person is or to the activity mentioned?

If the child is encouraged to make choices in the classroom, is there a noticeable change in her/his ability to identify possible alternatives, to state choices verbally, and then to follow through?

What happens when the child is requested to follow through on his or her own stated choice of activity as opposed to when attempts are made to require him or her to follow through? Also, what does a child do when circumstances prevent his/her following through on a stated choice?

Are there discernable patterns of verbalization over a period of time?

Possible Modifications

If the person studying choices made by children were interested in what children would choose to do in the classroom, then the first question could be changed to read, "What could you do in the classroom today?" The remaining procedure would be the same, only observations would be made within the class

rather than on the playground.

Examining children's perceptions of available choices and their selecting an activity from within the classroom allows one to interview children every day, while the questionnaire referring to outdoor choices might have to be cancelled on days when inclement weather prohibits outdoor activity. Also, problems could arise during the winter months when children wear hats, coats, mittens, boots, etc., and the teacher is kept busy helping the children dress.

Both forms of the question could be used if one wanted to study the relationship between classroom and outside choices of activity.

The focus of the question could be changed to study the child's pattern of choice in one specific interest area. For instance, the first question might be written as follows: "What could you build with the blocks today?," or if the child were older, "What subject do you plan to work on during the scheduled library study period?" Again, the procedure would remain the same.

The questions could be made even less specific by merely asking, "What do you want to do at school today?" If the stated choice is unavailable, is the child able to state an alternative?

The guide might be modified by adding a fourth section in which the child or youth observed after having stated a choice would be asked about his follow through or lack of it.

C. Teacher and Child Perception of Classroom Decision Making

Purpose and Past Use

The questionnaire for Teacher and Child Perception of Classroom Decision Making was developed by the staff at the Center for Young Children in order to investigate the relationship between the perceptions of the child and teacher as to who actually makes certain decisions in the classroom. The information was further analyzed to determine if there was a relationship between the accuracy of the child's perception and the child's level of maturity, mental age, and sex.[6] The questionnaire contains five items relative to classroom management, scheduling, and peer association. It requires only one person to interview the students and the teacher.

Figure 3. Questionnaire for Teacher and Child Perception of Classroom Decision Making

Child _____ Sex _____ Date of birth _____

Teacher _____

Date of Interview _____

Interviewer: "You have on a _____

Did you choose to wear it today or did your mommy choose it for you?"

Child Response:

[6]See Sandra Horowitz, Decision Making in Young Children: A Report of Research Findings, Part One, Monograph 2, 1971.

(Note: If child makes no response interviewer will wait approximately 30 seconds, and omitting the first sentence, "Mmm I see" below, go on with the statement beginning with, "Sometimes we get . . .")

Interviewer: "Mmm. I see. Sometimes we get to choose for ourselves, and sometimes grownups, like teachers or mommies or daddies choose for us. I wonder if you can tell me "

Questions	Teacher's Perception	Child's Response
1. Who chooses which of the things you play with at school? Comments:		
2. Who chooses what kind of juice we have at snack time? Comments:		
3. Who chooses what chair you use at snack time? Comments:		
4. Who chooses what friends you play with in school? Comments:		
5. Who chooses or decides when it is time to go home? Comments:		

Directions for using the Questionnaire for Teacher and Child Perception of Classroom Decision Making are as follows:

1. Complete the background information in the spaces provided at the top of the questionnaire.

2. Read the first Interviewer statement to the child and record her/his response in the appropriate space.

3. Read the second Interviewer statement in its entirety to the child if he/she responded to the first Interviewer statement. If he/she did not respond, omit the, "Mmm, I see" part of the statement and begin with, "Sometimes we get to choose . . ." as a preface to Question 1 on the questionnaire.

4. Ask the remaining four questions preceding each question with the phrase, "I wonder if you can tell me . . ." Record the child's response as completely as possible after each question is asked.

5. Write additional comments in the appropriate space either during the interview or after its completion.

6. Then ask the child's teacher the five numbered questions as they relate to each child by introducing the questions with the following statement: "How do you think (child's name) will answer the following set of questions?" After giving this introduction, the questions may be read exactly as they are written. Record in the appropriate space the teacher's response to each question.

7. Note additional comments in the place provided either during the interview or after its completion.

8. NOTE: If a teacher wishes to use this himself/herself, the procedure remains basically the same. The only revision necessary would be for the teacher to list his/her perceptions before interviewing the child.

Examining the Information Gathered

The information obtained could be organized by computing the number of times the teacher's perceptions agree with the child's. If more precise information is desired, then the area of agreement could be designated by listing the number of the questions where agreement occurred and the corresponding subject area. To facilitate this method, the questions can

be coded according to subject area. For example, the questions could be coded as follows:

Questions	Subject Area	Code
one	classroom management	CM
two	classroom management	CM
three	classroom management	CM
four	peer associations	PA
five	scheduling	S

A table could be developed in the following manner:

Teacher	Child One	Child Two	Child Three . . .
Number of Congruent Perceptions	4	2	3
Question Number(s)	1,2,3,4	2,3	1,3,4
Subject Area	CM,CM,CM,PA	CM,CM	CM,CM,PA

Such a table would yield descriptive information concerning how often teachers and pupils perceived the sources of decisions in the same manner and in what area they typically agreed. If the data revealed that many of the children disagreed with the teacher's perceptions, then the teacher might want to examine his/her behavior as well as that of the students and the program in order to determine what factors could be influential in causing the discrepancies. If the disagreements are ordinarily in one area, behaviors relative to that area could be examined more closely.

Additional Questions

On what occasions are the child's perceptions likely to differ or be the same as those of the teacher?

What is the relationship between the child's and teacher's perceptions when they are compared to classroom management, scheduling, and/or peer associations?

Is there a relationship between a child's awareness of the personal freedom to make choices and the subsequent choices made? NOTE: To obtain information regarding the subsequent choices made by the children, the Decision Making Interview Guide and Checklist for Decision Related to Materials and Activities may be used or the interviewer may observe the child to determine who actually makes the decisions relative to the areas questioned.

Is there a relationship between the teaching method as defined by the teacher(s) used in the classroom and the degree of agreement between the teacher and child?

Is there increased teacher-child agreement over an extended period of time?

Do children's perceptions tend to be more congruent with the teacher's perceptions when the person responsible for the decisions is present or visible?

Possible Modifications

The questions could easily be modified for use with populations other than those for which it was originally designed. For example, if the population were comprised of high school seniors the questions could include:

a) Who decided that you would take this subject this year?

b) Who decided what would be included in the course content?

c) Who decided where you would sit during this class period?

d) Who determines the evaluation procedures for this class?

e) When you are working in groups, who decides which persons will be working together?

If such a questionnaire were to be used with an older school population, an entire class of students could be asked to write their responses on a form. In this case, the space for teacher's perceptions would be omitted

and the space for comments enlarged. A separate form could be given to the teacher, or could be completed by the teacher, depending on who is gathering the information, and for what purpose. If the response of particular students was desired and they agreed to do so, students could be asked to write their names on the response form. If the anonymity of the students is desired, names can be deleted or code numbers assigned. Papers could be coded by section or class if a teacher wants. A teacher may use this questionnaire to get an idea of the general perceptions of a class or classes as a group.

The questions could also be revised to focus upon specific areas of interest to the user such as peer associations, evaluation procedures, or relevancy of course content.

D. Instruments to Record Pupil-Teacher Decision Behaviors[7]

Purpose and Past Use

The previous three sections on decision were based upon the assumption that teachers can describe the repertoire of decision making behaviors of young children. To examine further this assumption, a study was designed: 1) to determine the behaviors of young children which are elements of the decision making process and 2) to determine teacher behaviors which relate to the decision making behaviors of young children.

The study was conducted in three phases, only one (Phase II) of which is detailed here. In Phase I, teacher-learner interactions were examined, analyzed, and used to define the categories that describe the child behaviors involved in decision making as well as teacher behaviors that influence this process. Personal interactions observed were described in diary-fashion narratives which were subsequently subjected to content analysis. The categories which resulted from the content analysis of narratives are listed and described along with illustrative examples in "The Taxonomy of Decision Making Behaviors of Children Three to Five."

In Phase II, further analysis and observations using the taxonomy and its revision produced the observational instrument, Categories of Decision Making Elements (CODE). CODE is a reciprocal instrument and is designed so that the behaviors of the teacher and learner may be coded for each category and sub-category simultaneously. (See Appendix.)

In Phase III, CODE was used with a new group of students in a field situation. The purpose of this phase was to determine the practicality

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[7] See Carol A. Stevenson, The Development of an Instrument to Examine Teacher Influence on Decision Making Behaviors of Children Ages Three to Five. College Park, Md.: University of Maryland, 1973. Also see Occasional Paper Thirteen by the same author and with the same title, 1973.

and usefulness of the CODE system in research. CODE was used successfully by Stevenson in the selected setting and since has been used in at least two research projects designed to fulfill the requirements for doctoral dissertations at the University of Maryland.

Use of CODE in its entirety requires the teacher and/or observer to become familiar with all the categories, definitions, and examples listed before actually observing in the classroom. In Stevenson's study, the persons using CODE memorized the categories and subcategories. Flash cards describing the illustrative behaviors and coding of sequences filmed on video tapes were used in training observers. The observer recorded the numerical and alphabetical figures that were assigned to each category and subcategory in CODE as they were observed.

It should be noted that Stevenson defines decision making as the process of choosing between or among alternatives. If one studies CODE, one will note that many behaviors beside the actual choosing are related to the decision making process.

Directions for Use

CODE is found in the Appendix of this manuscript. Due to the complexity of the system, it is suggested that observers concentrate on one category at a given time and follow the simplified directions below.

1. Read CODE carefully. Determine which category is pertinent to your problem.

2. Become familiar with the category, its definition, and the illustrative examples. (Practice observations recording the behaviors that meet the criteria in the definition would be helpful.)

3. At the top of the recording sheet note the name, age, and sex of the person being observed, and the date, time and place of the observation. See Figure 4 on page 41.

Figure 4. Sample Coding Sheet A for Decision Making Behaviors of a Child or a Teacher

Child's Name or Number _____

Age _____ Sex _____

Time of Observation _____ Date of Observation _____

Decision Making Components (Select from Code or Taxonomy)	Sample Behavior Descriptions

Figure 5. Sample Coding Sheet B for Decision Making Behaviors of a Child and a Teacher

Name or Number of Teacher _____

Name or Number of Child _____

Date _____ Time _____

Category	Teacher Behaviors	Category	Pupil Behaviors

4. Select one or more categories from CODE and record these in the first column on Sample Coding Sheet A. Record in diary fashion, as the authors have done in the illustrative examples, the behaviors appropriate to the chosen category(ies) of interest. For example, if the category chosen was number 2 of CODE, "Focusing on a Problem," the observer might record a behavioral example: Susan taps the teacher on the arm and points toward two children who are arguing in the block corner. Or, a verbal example: The teacher responds to Susan by asking her, "What is the problem with Bob and Jerry?"

5. If you wish to look at interaction between the child and the teacher, take one or two categories from CODE and list them in the Category column of Figure 5. Record teacher behaviors to illustrate the category. Then in the column labeled "Pupil Behaviors" list exactly what the child did immediately following the teacher's behavior. See if you can name the category of the child's behavior from the CODE System. Record it in the category column.

Examining the Information Gathered

Careful study of the records obtained from several observations should supply the observer with some insight into decision making behaviors. For instance, in the first observation (See 4 above) Susan was able to focus nonverbally the teacher's attention to problems in the classroom. Then over time, as the teacher continued to request verbal awareness and descriptions of the problems, Susan was observed verbally identifying the problem situation instead of just using gestures. Depending on the concerns of the observer, the data can be interpreted in one of two ways. If the observer was studying the child's ability to define a problem, then the observer could conclude that from the time observation began, Susan progressed in being able to identify a problem. However, the mode of identification changed and the pattern and time of change would be noted in the observations. If the teacher's response was also of interest, then the observer might conclude that the teacher's constant reminders for verbal clarification did in fact have some influence on Susan's mode of communicating. This type of information would be of special interest to the

teacher involved.

Based on the nature of the information gathered, observers could make conclusions not only about the ability of the child to identify problems, the method of communication, and the teacher's influence but also on the nature of the problems identified and to whom problems were usually directed.

Additional Questions

Specific questions could be devised to utilize each category included in CODE. Some other, more general questions are listed below.

What cues indicate when the learner is having difficulty exhibiting behaviors related to decision making?

What are the patterns of behaviors that are exhibited prior to the actual decision?

What are the patterns of behavior that occur after a person makes a decision?

Does peer influence on the decision making behavior of a child differ from the teacher's influence? If so, in what way?

How do the young child's behaviors related to decision making change over an extended period of time?

In what areas does the child usually make his/her own decisions?

Does the learner typically ask for help or guidance in making decisions?

What teacher behaviors seem to evoke in the child certain behaviors related to decision?

Possible Modifications

Instead of keeping detailed, diary-type anecdotal records, the observer may record the frequency of certain behaviors being observed over a specified time interval.

For example, if the category under consideration is number 8C "Intending - Choosing: Following Through" from CODE, the data sheet might

look like this:

Child's Name or Number _____ Age _____ Sex _____

Observer's Name or Number _____ Date of Observation _____

Minutes of Observation

	1	2	3	4	5	6
Frequency of return	return to blocks		left blocks		return to blocks	

Comments: If the observer wishes to note which activities were chosen again and when the child left, she/he might note in block one "returned to blocks;" in block three, "left blocks", and in block five, "returned to blocks."

CHAPTER FOUR

COMMUNICATION:

Focus for Observation II

In this chapter, attention is given to four instruments designed to gain information about communication. The first instrument provides a means of describing changes in facial expression. The second instrument focuses upon touching behavior. Two instruments then follow designed to focus upon nonverbal behaviors of children and teachers.

A. Recording Changes in Facial Expression[8]

Purpose and Past Use

Four-, five-, and six-year old children who attended the Center for Young Children were observed in their natural environment, the classroom, in a study designed to investigate the following three questions:

> Do children seem to emit the same number of changes in facial expressions when they are alone as when they are in contact with another person?
>
> Does the number of facial expressions made when they are alone as compared with being in contact with another person vary with age?
>
> Are there any differences in the number of facial changes made between boys and girls when they are alone and when they are in the presence of another person?

A small "theater" was set up and children were made aware that films were being shown during free choice time. Each child was told that she/he could view one film alone and then, if she/he wanted, a friend could join

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[8] See Karen Rancourt, A Study to Compare Quantitatively the Amount of Change in Facial Expressions of Pre-Schoolers and Kindergarteners in Situations Lacking Contact with Another Person in Social Situations, Occasional Paper Number Five, 1973.

in watching the second film. Only children who viewed the film alone and subsequently requested that a friend join them were observed for the study.

Tally Sheet and Directions for Recording Changes in Facial Expression

Figure 6. Tally Sheet for Recording Changes in Facial Expression

Child's Number _____ Sex _____ Date of Birth _____

Observer's Name _____ Number of Observations _____ Date of Observation _____

Setting	Number of changes in Facial Expression per Minute			Other Persons
	1st min.	2nd min.	3rd min.	(boy, girl, age, etc.)
Child is alone				
Child is in presence of another person				
Child is in contact with another person				

Additional Remarks:

Note: The following definitions are necessary for using the Tally Sheet:

1. Change in facial expression is any visible transformation, alteration, modification, or assuming of a facial manifestation of feeling which is not physiological in nature (such as sniffing, coughing, blinking, or twitching). Examples of a change in facial expression: eyes widening, pouting, mouth opening widely, cheeks puffing out.

2. A child is considered alone when she/he is the only person in the "theater".

3. A child is in the presence of another when they are visible to one another, but when they are not engaging in any form of verbal or physical interaction nor sharing the same object.

4. A child is in contact with another if she/he is engaged in direct verbal or physical interaction with the other person, sharing an object with another, or is actively participating in a group activity.

The directions for using the Tally Sheet follow:

1. Complete the required background information requested at the top of the Tally Sheet.

2. Become familiar with the definitions necessary for using the Tally Sheet in the "Note" at the bottom of the Tally Sheet.

3. Observe the child for three minutes in each of the designated situations--when the child is alone, when the child is in the presence of another, and when the child is in contact with another.

4. Record each observed change in facial expression by making a straight line in the appropriate block. (Every multiple of five may be written by drawing a diagonal line across the other four lines as shown: 𝍸 𝍸 I. This would signify eleven observed changes in facial expression.)

5. Identify the other person(s) in the appropriate blanks.

Examining the Information Gathered

The data obtained from the Tally Sheet are quantitative in nature. The information gained will be interpreted in terms of the frequency or the actual number of facial changes that are observed within a specified time frame. An observer may use the data to determine under what conditions and in which situations facial changes occur most often. The data may be examined by comparing the observed frequencies between individuals and/or designated groups. If analysis of the data leads one to conclude that specific persons

in particular situations tend to communicate their feelings nonverbally through facial expressions, then the teacher, parent, employer, or others , may decide to duplicate these conditions in order to facilitate this form of communicating. Or, the decision could be reversed.

Again, statistical analysis are used and conclusions made in accordance with the problem, the reason for exploring it, and statistical sophistication of the observer.

Additional Questions

Do boys or girls use this form of nonverbal communication more often?

Do groups from various ethnic origins differ significantly in the use of facial expression as a form of communication?

In what situations do people use this silent language most often?

Does the child typically use this method of communicating when in the presence of certain other persons?

Possible Modifications

The time intervals could be modified according to the needs of the observer. Instead of using one-minute intervals, an observer may decide that longer time periods, five-minute intervals for example, are more suitable. An observer may wish to extend the observation period beyond three consecutive minutes. For instance, two separate five-minute observations with a two-minute break between might be preferable. In this case, the Tally Sheet would be revised as follows:

Number of Changes in Facial Expression Observed Per Minute										
One	Two	Three	Four	Five	Break	One	Two	Three	Four	Five

The situations could be altered to fit the particular question(s) being investigated. For example, the observation could focus upon the number of changes in facial expression when the observer is in contact with peers, parents, siblings, student teachers, or teachers. The focus could be upon persons when they are engaged in free choice activities or more structured periods.

In the study which prompted the design of this Tally Sheet, all changes in facial expression were noted; however, the sheet could be used to record the occurrence of specific facial expressions such as the number of times a child smiles, frowns, pouts, or opens her/his mouth wide.

B. Recording Touching as Communicating[9]

Graduate students enrolled at the University of Maryland conducted an exploratory study designed to investigate the moral behaviors and values of five-year olds. The major focus of this study was the child's perception of affectionate physical contact. The study was conducted in two phases. In the first phase, each child was shown a series of three pictures. The pictures depicted different situations in which persons were engaged in some form of physical contact. As the children viewed the pictures, they were interviewed and asked to respond to questions concerning the pictures. In the second phase, a Form for Observing Physical Contact was developed and used to determine if the children's verbal reactions to the pictures had any relationship to the observable affectionate physical contact displayed by them during the classroom experience.

In the Anderson study which grew out of the earlier one on moral behavior, the Form for Observing Physical Contact was revised and used to look closely at touching as a communicative behavior during a time when the children being studied were engaged in a quiet activity. After successive observations, the touching behaviors of three-, four-, and five-year olds were compared. The revised form included six additional categories. The form was used by an observer to record from an observation booth the behavior of two children as they viewed a film in a specially built "theater-corner." Note that the terms touching and physical contact are used interchangeably in this discussion.

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[9] See Marilyn Childress, Marian Greenblatt, and Robert Fessler, Preliminary Investigation into Moral Behavior with an Emphasis Upon Physical Contact by Five-Year Olds, Occasional Paper One, 1972; and Mary Lou Anderson, Touching: Communication During a Quiet Activity, Occasional Paper Number Eleven, 1972.

Forms for Observing and Tallying Physical Contact and Directions

The operational definitions of categories of physical contacts and the two forms used in the study on touching as communicating follow.

Operational Definitions of Categories of Physical Contacts

1. Fear-motivated contact

   Any contact that is motivated by fear of something or someone other than the person with whom one is in contact. This includes embracing, grasping when an object of fear is present.

2. Aggressive contact

   Any contact which appears to be motivated by negative feelings or appears to be a deliberate hostile act. The following are examples of aggressive behavior: hitting, pushing, kicking.

3. Control-by-contact

   Any contact which attempts to restrain another person, or to keep him from an action, or physically to move or guide another person. Examples might include: picking up a person, blocking a person's path by physical contact, or removing another's arm from your line of vision.

4. Attention getting contact

   Any contact which appears to be motivated by getting the attention of someone else. It includes tapping another person on the hand, shoulder, etc.

5. Accidental contact

   Contact that appears to be unintentional. It includes the following:

brushing past a person, touching a person, touching a person when engaged in an activity in which people are close to each other but are not required to touch one another.

6. Exploratory-tactile contact

Any contact in which the dominant behavior is exploration by means of the sense of touch. This includes an observation such as: one child feeling another child's hair by stroking it (or it could be clothing, etc.) while still attending to some other person or task. The exploratory-tactile behavior must be secondary to some other task.

7. Cognitive contact

Any contact, utilizing the sense of touch, in which the primary motive appears to be learning by touch. Examples would include: children "feeling" the wrist of another child to determine the size of the wrist, or two children squeezing hands to see who is stronger.

8. Extension of verbal communication by contact

This contact follows or accompanies some form of verbal communication, and emphasizes it. The contact would not have an affective component such as a hug or a slap. It includes: touching a person when giving a direction, etc.

9. Required contact

Contact required by rules or by an authority figure. It would include the following: contact during games which require contact, or holding hands when a teacher requests that students hold hands.

10. Companionship contact

Contact, involving any part of the body, with another person's body in which the other person does not withdraw and the contact is maintained for a period of time. Examples include: two children touching legs during a story-time, two children holding hands while watching a movie, etc. The contact must be secondary to the primary interest of the children.

11. Expressive contact

This contact, highly affective in nature, is an exuberant attempt by one person to express and share with another person his pleasure in what he is experiencing. The primary focus is on the experience, and the touching contact is only secondary and is not maintained. This includes: a quick embrace, impulsive grasping, etc. such as during the excitement of a close football game.

12. Affectionate contact

Any contact which appears to be motivated by positive feeling toward another person. It includes the following types of contact: hugging, helping, holding hands, telling secrets, intentional contact while playing with another person. To this original definition a limitation is now needed. Affectionate behavior must be the primary focus of the individual at the time.

13. Other contacts

Any contact which cannot be included in the previous categories.

Figure 7. Form for Observing Physical Contact

Date _____ (Observation of Two Students Simultaneously)

Student A (#)

Student B (#)

Category-Code

1. Fear
2. Agressive
3. Control
4. Attention Getting
5. Accidental
6. Exploratory-Tactile
7. Cognitive
8. Extension of Verbal
9. Required Contact
10. Companionship
11. Expressive
12. Affectionate
13. Other

Description: Type of Contact

I Student A	II Student B	III Mutual	IV Category Name or Code (#1-73)

Note: Vocal communication during contact is indicated by an asterisk (*) following the category code.

Figure 8. Form for Tallying Physical Contact

Date _____ Observer _____

Category of Contacts	Numbers of Contacts		
	Student A	Mutual	Student B
1. Fear			
2. Aggressive			
3. Control			
4. Attention Getting			
5. Accidental			
6. Exploratory-Tactile			
7. Cognitive			
8. Extension of Verbal			
9. Required Contact			
10. Companionship			
11. Expressive			
12. Affectionate			
13. Other			

Remarks:

The directions for using the forms are as follows:

1. Become familiar with the categories and the corresponding operational definitions, and practice using the above forms. Following are suggestions for practice in using both forms.

   Use the Form for Observing Physical Contact to record in diary-fashion descriptions of the touching behavior of two students. Record both independent (Columns I and II) and mutual (Column III) touching behaviors. In Column IV write the category names such as Fear or its code number, corresponding to each diary-fashion description. This should aid the observer in identifying behaviors by category and should facilitate his/her use of the Form for Tallying Physical Contact.

   The second form, the Form for Tallying Physical Contact, can be used to tally frequencies of touching behavior categories when recorded on the Form for Observing Physical Contact or to tally directly when observing if a study calls for only quantitative information and diary-fashion recording is not desired. If an observer tallies directly while observing, the occurrence of categories can be noted by placing slashes or check marks in the appropriate cells or blocks.

2. The Form for Observing Physical Contact may be used in one of two ways: First, the observer can do as suggested in the practice method and record all the touching behaviors observed in diary-fashion. Such recording should be as objective as possible and exclude interpretations of what the observer thinks the behaviors might mean. Or, the observer can omit recording in diary-fashion and record in the appropriate column only the numeral or category name corresponding to the observed behavior. Columns indicate who initiated the contact, Student A or Student B, and whether it was a mutual experience. Column IV would not be used in this procedure.

3. Observe for a series of three five-minute periods. Break two minutes in-between. A tape recorder indicating designated time segements can be used.

4. On the Form for Tallying Physical Contact, place a check (✓) in the appropriate row when a behavior is observed. Match it with the corresponding column indicating whether the touching was initiated by Student A, Student B, or whether it was mutual contact.

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[10] For further information on recording in diary-fashion, See Jessie Roderick with Joan Moyer and Ruth Spodak, Nonverbal Behavior of Young Children as it Relates to Their Decision Making: A Report of Research Findings, Monograph 5, 1971.

Examining the Information Gathered

Although how information is organized and analyzed depends on the question being investigated and procedures employed, some suggestions for examining information gathered with these touching instruments follow. The forms lend themselves to obtaining frequency counts of categories observed and persons who exhibited them. This method of organizing provides a summary of the number and forms of physical contacts observed among the pairs of children being studied. The touching contacts can also be totaled by category as shown below.

Categories of Touching Contacts	Pairs Identified by Names or Numbers and Sex				Total by Category
	#1 MF	#2 MM	#3 MF	#4 FF	
Aggression	3	0	5	1	11
Attention-Getting	0	0	1	0	1
etc.					
Total by Pair					

The information obtained may also be tabled in terms of the rank order based on the total number of contacts in each category. This provides the observer with a summary of which behaviors occurred most often and the frequency with which each occurred.

The data could also be analyzed by listing each of the 13 categories and giving the number of observed touching behaviors in each category and the percentage figure for that category as it compares to the total number of touching behaviors observed. See the example below.

Categories of Touching Contacts	Age					
	Threes		Fours		Fives	
	Number	Percent	Number	Percent	Number	Percent
Aggressive	11	20	0	0	1	2
Attention-Getting	1	2	1	4	1	2
Fear	0	0	0	0	0	0

A table could also be prepared to show the variations in the number of touching contacts by pairs within each group and/or among several groups if appropriate. This would give the reader a quick view of the range of contacts observed as illustrated below.

Age	Number of Contacts																				
	0		1		2		3		4		5		6	. . .	16		17	. . .			
Three-year group (8 pairs)		1		1				1													
Four-year group (8 pairs)		2		1		1			2												
Five-year group (9 pairs)									1		2				1						

Hypothesized Summary:

Threes--range: 0-15
Fours--range: 0-10
Fives--range: 3-16

These forms of analysis could also be used with data gained from the observation records of one individual.

Additional Questions

Are there age and sex differences in terms of the frequency of physical contact? The mode of physical contact? The initiation of physical contact?

Are there changes in the observed frequencies over time?

Do such qualities or characteristics, as socio-economic level, race, language spoken, make a difference in the amount and kind of physical contact?

What differences are found when the touching behavior of persons in special relationships is studied? For example, what forms of physical contact are observed between father-son, mother-baby, teacher-student, grandparent-grandchild, employer-employee, teacher-student teacher?

How does the mode of physical contact differ as the individual being observed changes social roles? For example, the student as a ball team captain, a member of a "slow reading" group, a sibling, a daughter, an employee?

What forms of physical contact are observed between a person and a pet or on an inanimate object such as a toy?

What are the observable reactions of the youths being observed to the various forms of physical contact?

How do other children in the group react when they observe their peers in some form of physical contact?

(The above questions could be studied by extending the records for the Form for Observing Physical Contact to include a diary-fashion record of the information desired.)

Possible Modifications

Both forms lend themselves to use with samples of diverse ages and in a wide variety of settings. They can be used with babies and adults in structured settings such as classrooms or business offices, or in less structured situations such as the home.

The time intervals may be altered to suit the needs of the observer. The number of observations is also dependent upon the observer's particular research. Individual categories could be studied apart from the entire system, either singularly or several at a time.

C. Pupil Nonverbal Behavior Category System[11]

The Pupil Nonverbal Behavior Category System was designed for the systematic identification, categorization, and recording of nonverbal behavior of young children. It consists of twelve mutually exclusive categories, their definitions and descriptions, and illustrative behaviors. As an initial step in developing the instrument, observers recorded in diary-fashion all behaviors their subjects exhibited during free play. The subjects were three-, four-, and five-year old children attending the Center for Young Children. The categories of the instrument were then derived by subjecting the diary-fashion records to content analysis. Recording symbols were assigned each category in order to facilitate quick coding of observed behaviors.

The Pupil Nonverbal Category System was developed initially to give information about young children in the process of making a decision. On a tally sheet devised for use in this project, observers noted the activity in which the child was engaged, symbols for nonverbal behavior categories observed, the person the behavior was directed toward, in response to, or in cooperation with, the time spent at each noted activity, and a judgment as to whether each nonverbal behavior category observed could be placed at the beginning, middle, and end of the decision-making continuum as defined in the project. (See page 61).

The category system and corresponding tally sheet were used in descriptive studies to investigate the following questions: What is the frequency with which nonverbal behaviors occur during free play? What

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[11] See Jessie Roderick with Joan Moyer and Ruth Spodak, Nonverbal Behavior of Young Children as It Relates to Their Decision Making: A Report of Research Findings, Monograph 5, 1971.

nonverbal behaviors appear to be associated with the decision-making process and which behaviors occur at the beginning, middle, and end of the decision-making continuum? What sex and age differences are evident in nonverbal behaviors associated with the decision-making process? What personal interactions by sex and age are evident at various points of the decision-making process? Since the initial development and use of the Pupil Nonverbal Behavior Category System, it has been revised and used in a variety of settings with students and teachers at all levels of schooling.

Tally Sheet and Directions

The Pupil Nonverbal Behavior Category System, Figure 10, as used in the initial study is at the end of this chapter. Also included is a revised form with illustrative teacher behaviors. The category system may be employed in its entirety or an observer may wish to select one or more categories of particular interest to him/her in terms of the question being explored.

The tally sheet and directions for using it follow.

1. Read and become familiar with the category(ies) of interest. (The observer will define her/his own method for learning the system. In the past, persons have memorized the system and participated in two one-hour training sessions using videotapes which focused on the behavior of one child. When video equipment is unavailable, persons can observe in classrooms or utilize films in familiarizing themselves with the system. Working in pairs is desirable for feedback under these circumstances.)

2. When the observer feels sufficiently familiar with the category system, she/he is ready to use the Tally Sheet for Recording Nonverbal Behaviors (Figure 9).

3. Complete the background information required at the top right-hand side of the Tally Sheet.

4. In Column I (Activity) write the task or type activity in which the child is engaged, ie.e., painting, blocks, slide.

Figure 9. Tally Sheet for Recording Nonverbal Behaviors

Subject # _____
Observer _____
Date _____
Time _____

H - Habitual
FE - Feeling Expression
FS - Focusing-Seeking Behavior
IP - Initiating Positive
IN - Initiating Negative
MTP - Movement Toward People
P - Pause
TO - Task Oriented
RP - Response Positive
RN - Response Negative
W - Withdraw
CJ - Cannot Judge

I	II	III	IV	V	VI	VII		VIII
						Task Completed		
Activity	Category	Peer	Group	Teacher	Student Teacher	Activity	Time-5	Beginning Middle End

The tally sheet as used in the original study is presented here in its entirety. However, for general use, Column V should be deleted. Column VII might also be deleted.

5. Record in Column II (Category) the symbol for each behavior in sequence.

6. Record for ten minutes, take a five-minute break, and then record for another ten minutes. NOTE: The time intervals may be altered to suit the individual observer. For example, intervals of observation could be shortened to two-minute periods followed by two-minute breaks. Tape recordings noting the length and number of intervals could be used to signal the passage of time to the observer.

7. After each interval of recording, draw a horizontal line under the last category recorded and proceed.

8. Place a (✓) in the appropriate column (either Column III, IV, V, or VI) signifying whether the behavior was directed toward, in response to, or in cooperation with a peer, a group of children, the teacher, or the student teacher. If group is comprised of children and teacher and/or student teacher, check "group" column and other appropriate columns. Record each interaction with others in the sequence in which it occurs.

   NOTE: Since in this system the categories Feeling Expression (FE) and Pause (P) are not viewed as behaviors directed toward, in response to, or in cooperation with another, there is no need to make a decision relative to Columns III, IV, V, or VI for FE and P.

9. In Column VII (Task Completed) place a (✓) under Activity if child's behavior suggests he has completed task or a (✓) under Time-5 if he has stayed with the task for 5 minutes.

10. In Column VIII, using a B-(Beginning), M-(Middle), E-(End), designate which behaviors in Column II appear to be at the beginning, middle, or end of the decision continuum.

    NOTE: It is recommended that Column VIII not be included for general use.

Examining Information Gathered

In using this instrument and tally sheet, the observer identifies a behavior and simultaneously makes a judgment as to which category symbol is to be recorded. The coding unit is a behavior. Everytime a subject exhibits a nonverbal behavior a category symbol is recorded. The data gathered through this procedure provide a sequential account of the range of nonverbal behaviors exhibited during any given period. The data may be recorded in terms of a time unit such as recording once every 10 seconds.

Examination, analysis, and discussion of the data may vary depending upon the interests of the user and the research question being investigated. For example, if the occurrence of behaviors according to age and sex was being studied, then the mean frequencies and corresponding percentages of occurrence for each category according to age and sex could be calculated. Analysis of the data in terms of the length of time a learner spent within an observed category could also be tabulated if time records were kept. The data could also be interpreted in terms of the relationship between nonverbal behaviors observed and the activities with which they usually were associated.

Additional Questions

Which categories are observed as the child goes about his work in school? Do some categories appear to be irrelevant to certain school tasks? What nonverbal cues indicate when the child is having difficulty? Which behaviors are evidenced when a task is not challenging or is boring? When is the child ready to move to another task?

What is the relationship between Initiating and Responding Behaviors or Positive and corresponding Negative nonverbal behaviors as defined in the Category System? Which occur most frequently? Are there significant age and/or sex differences? Under what circumstances are they typically exhibited, i.e., with which activities are they usually associated and with whom?

Are there nonverbal behaviors which are more typically associated with peer interactions than with child-adult interactions? With solitary play? With group interactions?

What kind of setting best lends itself to children's showing a wide range of nonverbal behaviors?

Possible Modifications

As mentioned earlier, the observer might find it more suitable to use one or several instead of all the categories included in the Pupil Nonverbal Behavior Category System. Information indicated on the Tally Sheet that is irrelevant to the observer may be omitted and the Tally Sheet shortened. For example, if the observer does not want to record personal interactions, then the columns labeled peer, group, teacher, and student teacher could be

eliminated.

Observers may wish to use the category system without the corresponding Tally Sheet. For instance, observers studying one or a few categories may prefer to find and list as many examples as possible that illustrate the category rather than tallying the frequency of behaviors that are observed.

Figure 10. Pupil Nonverbal Behavior Category System

Recording Symbol	Category Description	Illustrative Behaviors
H	Habitual Perfunctory acts performed automatically	Hang up coat, take seat, wash hands, throw away milk cartons
	Mechanical personal acts	Mouth open, shake hair out of eyes, hands behind back pulling at own clothing
FE	Feeling Expression Facial expression of feeling	Bite lip, furrow brow, grit teeth, smile
	Expression of emphasis	Pound on table or equipment, fold arms and stomp foot
	Communicating with self	Sing, hum
	Overt expression accompanying body movement	Skip, run quickly, drag feet
FS	Focusing-Seeking Observe, watch closely, listen	Observe animal, look at teacher or child perform or giving directions, listen to story
	Seek approval, praise, help, recognition, permission, alternatives, ideas	Look around at people and/or situation; move from one object, place, person to another in quick succession. Grin at teacher or children, tug on clothes of other person
IP	Initiating Behavior--Positive Bodily contact and/or gesture in which child reaches out to show affection, to be friendly, to show interest in, to praise	Pat on back, tap on arm or shoulders, hug

Recording Symbol	Category Description	Illustrative Behaviors
IN	Initiating Behavior--Negative Bodily contact and/or gesture in which child strikes out at another child or teacher for no apparent reason	Hit, push, kick, bite, pull hair, slap, spit at
	Reaches for or grabs for toy and/or materials from another child or teacher	Snatch, tug, pull toy or materials away from child or teacher
MTP	Movement Toward People Movement toward person or persons	Walk to person or persons (perhaps to direct, initiate, join
P	Pause Stop in course of action	Stop in process of doing something, vacant look
TO	Task Oriented Approaching and/or working at an activity and/or materials	Manipulate materials, objects, play game, demonstrate skill or use, point out objects, approach toy or equipment, return to task
RP	Responsive Behavior--Positive Positive response to directions, questions, commands, suggestions, invitations, gestures	Share materials, perform activity, discontinue action, shake head "yes," gesture with hands "I don't know," shrug shoulders
	To emotional expressions (crying, shouting)	Extend hand, self in help; walk over to, put arm around
	To deliberate acts (putting arm around, giving toy)	Accept toy, accept affection, snuggle up to

Recording Symbol	Category Description	Illustrative Behaviors
RN	Responsive Behavior--Negative Negative response to directions, questions, commands, suggestions, invitations, gestures	Make a face, bodily contact, continue action, turn away
	To emotional expressions (crying, shouting)	Ignore, turn away, laugh at, point at
	To deliberate acts	Stomp feet, cry, attack, shake fist, clutch at toy and/or material
W	Withdraw Remove self from situation, task or activity involving people and/or equipment	Move away from (leave) toys, activity, materials, equipment Avoid a situation
CJ	Cannot Judge Observer cannot make a judgment or child is out of view	

NOTE: In other forms of the Pupil Nonverbal Behavior Category System the category Focusing-Seeking is divided into two categories. The categories are described as follows:

Seeking Behavior--Seeking approval, praise, help, recognition, permission, alternatives, ideas, response

Focusing Behavior--Observes, watches closely, listens

The Nonverbal Category System R^2 which follows includes sample teacher behaviors from teachers of different age classes. Illustrative pupil behaviors given are basically those of pre-school children, but illustrative behaviors of elementary and secondary school students were also tabulated. The category descriptions applied across the board age-wise with variations in illustrative behaviors. These behaviors can be found in Occasional Paper Number Two entitled A Category System to Describe the Nonverbal Behavior of Teachers and Students: An Interim Report, pp. 22 and 23.

Figure 11. The Nonverbal Category System (R^2 Form)[12]

Category Description	Illustrative Behaviors	Illustrative Behaviors-Teacher
Habitual Perfunctory acts performed automatically	Hang up coat, take seat, wash hands, throw away milk cartons	Takes seat, takes roll, pushes chair in, opens door, throws paper towel away
Feeling Expression Mechanical personal acts	Mouth open, shake hair out of eyes, hands behind back, pull at own clothing, shrug shoulders	Leans toward or bends over, leans on object, hands in pocket (plus same behaviors listed for pupil illustrative behaviors)
Facial expression of feeling	Make a face (wink), grin (blush, worried glance)	
Expression of emphasis	Bite lip, frown, grit teeth, smile, folding arms, striking surface with hand, shaking finger, fist, or arm	
Communicating with self	Sing, hum	
Overt expression accompanying body movement	Skip, run quickly, drag feet	
Seeking Behavior Seeking approval, praise, help, recognition, permission, alternatives, ideas, response	Look around at people and/or situation, move from one object, place, person to another in quick succession, look to teacher or children, tug on clothes of other person	Motions with finger to approach, gestures for silence, raises hand, moves around room, looks around room

[12]See Jessie Roderick, Jacqueline Vawter, and Others, A Category System to Describe the Nonverbal Behavior of Teachers and Students: An Interim Report, Occasional Paper Number Two, 1972.

Category Description	Illustrative Behaviors	Illustrative Behaviors-Teacher
Focusing Behavior Observes, watches closely, listens Note: Behaviors of observable involvement with and/or manipulation of materials, etc. are not included in this category.	Observe animal, look at teacher or child perform or giving directions, listen to story	Watches pupil(s), looks at object, watches an activity, listens
Pause Pause in course of action, retreat within a situation such as putting head down. Note: This is not total bodily withdrawal from one situation to another.	Stop in process of doing something, vacant look, stare, blank expression, day dreaming, putting head down	Looks at clock
Task Oriented Approaching and/or working at task and/or materials	Approach toy or equipment, manipulate materials, objects, play game, demonstrate skill or use, point out objects, return to task	Manipulates materials, picks up object, holds up or points out an object, writes
Withdraw Remove self from situation, task or activity involving people and/or equipment. Note: To withdraw or remove self from activity implies movement of the total person from a place or situation.	Move away from (leave) toys, activity, materials, equipment	Leaves pupil(s), leaves an activity
Movement Toward People Movement toward person or persons--to direct, initiate, join, aid. Note: Movement implies travel of the total body across an area or space.	Walk to person or persons	Approaches pupil, group or activity

Category Description	Illustrative Behaviors	Illustrative Behaviors-Teacher
Initiating Behavior--Positive Bodily contact and/or gesture in which child reaches out to show affection, to be friendly, to show interest in, to praise. Note: Facial expressions are not included in this category.	Pat on back, tap on arm or shoulders, hug, offers toy, object, or materials to other child or teacher	Pats or touches pupil, puts arm around pupil, hands object to pupil, helps pupil
Initiating Behavior--Negative Bodily contact and/or gesture in which child strikes out at another child or teacher for no apparent reason. Reaches for or grabs object from other person. Note: Facial expressions are not included in this category.	Hit, push, kick, bite, pull hair, slap, spit at, snatch, tug, pull toy or materials away from child or teacher	Takes object from pupil
Responsive Behavior--Positive Positive response to directions, questions, commands, suggestions, invitations, gestures, total environment or situation To emotional expressions (crying, shouting) To deliberate acts (putting arm around, giving toy)	Share materials, perform activity, discontinue action, shake head "yes", gesture with hands "I don't know" Extend hand, self in help; walk over to, put arm around Accept toy, accept affection, snuggle up to	Points to pupil (as in calling on pupil with raised hand), nods approval, accepts object, follows pupil to object at pupil's request

Category Description	Illustrative Behaviors	Illustrative Behaviors-Teacher
Responsive Behavior--Negative Negative response to directions, questions, commands, suggestions, invitations, gestures, total environment or situation	Bodily contact, continue action, turn away	
To emotional expression (crying, shouting)	Ignore, turn away, laugh at, point at	
To deliberate acts	Cry, attack, clutch at toy and/or material	
Note: Facial expressions are not included in this category.		

CHAPTER FIVE

INVOLVEMENT:

Focus for Observation III

Nonverbal Indicators of Involvement[13]

Children, youth, and adults all need opportunities to become involved to the degree they wish in interactions with other persons or materials. Persons responsible for what happens in classroom and other settings need to provide opportunities for children and youth to become involved in life interactions that hold meaning for themselves and others.

Purpose and Past Uses

Before teachers, children, youth, or others can know whether or not persons are involved to the degree they desire or whether efforts to provide a setting to encourage involvement have been successful, there must be a way of describing what persons who are involved do. It is for this purpose that the Involvement Instrument was developed. This instrument is offered as one way to describe nonverbal behaviors that suggest the degree to which a person is involved in an activity or interaction. The Instrument (Figure 12) and Directions for Using the Coding Sheet are found at the end of this chapter.

The categories of the Involvement Instrument were derived from diary-fashion recordings of nonverbal behaviors of three-, four-, and five-year old children in the classroom setting. During the process of developing and

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[13] See Jessie A. Roderick, The Involvement Instrument, Occasional Paper Number Fifteen, 1975.

refining the instrument, different forms were used to gather data that formed the basis for further revisions. The instrument as presented here, or parts of it, were used in several studies and in an inter-coder agreement check. Reliabilities of .70 and above were achieved for each of the categories.

Among the questions explored by using the Involvement Instrument are the following:

How does a child's indicators of involvement vary with different activities and times of the day?

What is the relationship between teacher and child indicators of involvement?

How does group size seem to effect the level of teacher involvement as described by indicators on the Involvement Instrument?

What indicators of involvement are evidenced when persons interact with increasingly complex settings or activities?

Examining Information Gathered

The information obtained from using the Involvement Instrument Coding Sheet is in the form of frequencies for the categories of Motion, Vision, Facial, Stance, and Pause. These frequencies can be converted to percentages for comparisons among categories. The ratings for Preciseness and Physical Display of Emphasis may be averaged. Frequencies may also be obtained on the number of different activities or interactions and on the repetition of or return to an activity(ies).

Frequencies or percentages for categories may be examined in terms of the individuals observed, the times the observations were made, the nature of the context, or the kinds of activities or interactions during which they were observed. A person's involvement can be observed and compared over a long period of time noting changes in categories such as Motion-on-task, Motion unrelated to task, Facial, and Vision. One might want to focus on Pause

in terms of when Pauses occur, the frequency, and duration of them.

More sophisticated statistical analyses can be applied to the information or data if the question being explored calls for such and if facilities are available. How the information is examined or how data are analyzed varies with the problem, the setting, and available help. If frequencies and percentages are calculated for the different categories, it is important to not assume that high frequencies or percentages are conclusive evidence of high involvement. The high figures, comparatively speaking, suggest a degree of involvement, but along with this evidence must be considered questions such as, "Involvement with what and for what?

Additional Questions

How does involvement in interactions with other persons differ from involvement in interaction with materials?

Are there differences in involvement indicators between boys and girls who are engaged in similar tasks?

During which kind of lesson such as group project work, individual work, group discussion, or dialogue does a person appear to be more involved? Does this change with time?

Does a person consistently become involved in the same or similar activities?

Possible Modifications

The number of categories coded and rated could be reduced to facilitate generating information as well as narrowing the observational focus. Depending on the question, a revised coding sheet might look like this:

Content	Activity	Motion	Vision
		M_P, M_A	V_P, V_A

If a person is observing without a partner and is not concerned about

comparing his codings with those of another observer, the 10-second observation unit can be ignored and only the duration of the whole observation noted.

Verbal utterances indicative of involvement could be recorded and compared with the coding of the nonverbal ones on the Involvement Instrument. In this case, it would be necessary to have two persons gathering data--one the nonverbal and the other the verbal. Another possibility would be to tape record the verbal and then go back and compare it with the nonverbal. Examples of verbal statements which might indicate involvement are:

> "I'm going to see how many different ways I can work this problem."
>
> "John, will you try to work this puzzle? I've done it, but would like to see how someone else might do it."
>
> "I wish there were several more chapters in this book. I hate to see it end."
>
> "I'm going to sign up for Candy Stripers again next year. Meanwhile this summer I'm going to take another course in hospital care."

Figure 12

INVOLVEMENT INSTRUMENT

CATEGORY	DEFINITION AND DESCRIPTION	EXAMPLES
Context	Context can be described in terms of the following elements in the setting:	
	1. age of the group or type of class	3-5 yr. olds; preschool
	2. teacher or leader role	directive, non-directive, initiating or responsive behavior
	3. space--(a) placement of persons in the setting; (b) use of space by persons; and (c) size of space areas	large open area; centers defined by furniture arrangement; persons in small clusters around the room
	4. prominent or unusual features of the setting	visitor in the classroom; theme pervading all activities
	5. time framework--time of day; time scheduling	snack time; free choice time; large block of time
	6. observable changes in any of the above	class moves to playground; teacher role changes
	7. other features specific to your research question	special equipment, materials, furniture arrangement, or grouping of persons
Activity (task)	An Activity exists when the following three criteria are met:	
	1. evidence exists of interaction between the observed person and another person(s) and/or materials;	observed person working with puzzle

CATEGORY	DEFINITION AND DESCRIPTION	EXAMPLES
	2. evidence exists to indicate that the observed person is giving priority to selected material(s)/ person(s) from within the context,	directs attention to puzzle even though other persons move in and out of puzzle area
	3. evidence exists of employment of parts of the body and/or senses.	manipulating pieces with fingers and hands
Alternate Activity	An Alternate Activity is characterized by behavior that does not fit the Activity definition.	dancing alone, talking to oneself, running, meandering, etc.
Motion	Motion is defined as movements of the body as a whole and/or parts of the body. Note: Motion is recorded by using the sub-categories that follow. Each is identified by a subscript.	crawl, throw an object, raise an arm
	M_T--Motion on task or related to task (activity)	stirring (when Activity or task is cooking); turning the page (when Activity is reading)
	M_{T_P}--Motion related to task with person(s)	showing someone how to do a finger play or dancing with a partner
	M_{T_M}--Motion related to task with material(s)	typing on a typewriter
	M_{T_B}--Motion related to task with both person(s) and material(s)	constructing a collage in collaboration with other person(s) or showing picture to teacher or peer
	M_A--Motion unrelated to task or Activity	turning away from a task and picking up a book dropped by a passer-by

CATEGORY	DEFINITION AND DESCRIPTIONS	EXAMPLES
	M_{A_P}--Motion unrelated to task with person(s)	reaching out during parallel play or other solitary activity to pat, push, or kick another
	M_{A_M}--Motion unrelated to task with material(s)	while working at clay table, subject reaches over to water table and pushes boat
	M_{A_B}--Motion unrelated to task with both person(s) and material(s)	while working with clay, subject passes paint to another person
	M--Motion that cannot be identified as related to previous or emerging tasks; "comfort motions"	shifting a leg
Pause	Pause is defined as a person's temporary cessation of an Activity or a condition in which voluntary gross movements of the body stop. There is an expectation that the Activity or Alternate Activity will continue after the pause.	stops running for a few seconds and then continues
Vision	Vision is attention of the eyes as demonstrated by eye movement or eye position. Also included is head movement associated with eye position (head movement often facilitates or makes eye movement possible).	
	Subscripts:	
	V_T--eyes focused on task (Activity); vision may be directed toward person(s) or material(s)	looking at puzzle pieces when activity is putting puzzle together
	V_A--eyes directed away from task	looking up or away from a task

CATEGORY	DEFINITION AND DESCRIPTIONS	EXAMPLES
	V--eye attention cannot be judged V_T or V_A	looking around while dancing, rolling the eyes, widening of the eyes, etc.
Stance	Stance is defined as any change in whole body position.	sitting down, kneeling, standing up, or squatting which lasts more than a fleeting moment
Facial	Facial is defined as any change involving the total face or parts thereof not included in Vision. Mouth movements accompanying speech are also excluded.	movement of the lips, tongue, nose, forehead; biting lips, turning down the lip
Preciseness	Preciseness is indicated by evidence of restrained, controlled body movements or withholding of force resulting from the following:	
	1. delicate or careful manipulation of material(s)	placing small amounts of glue on a light fragile material
	2. careful or controlled interaction with person(s)	guiding a person's hand in writing
	Note: Preciseness refers to process not accuracy. Low, moderate or high rating is designated by 1, 2, or 3.	

CATEGORY	DEFINITIONS AND DESCRIPTIONS	EXAMPLES
Physical Display of Emphasis	Physical Display of Emphasis is defined as a display of force which may or may not be directed toward person(s) or material(s). It is a pushing out from the body as opposed to a holding back of force. Note: 1, 2, or 3 designates a low, moderate or high rating.	Indicators include muscular contractions, colorations, tremors as found when grasping the handle of a hammer while pounding or clenching a fist
Comments	Comments are explanatory notes, reactions or helpful suggestions. Also recorded are inferences made as they correspond to Vision.	Child is out of sight of observer. V_I--It appears that person looked away (inference).

Coding Sheet
Nonverbal Indicators of Involvement

Date _____ Time _____ Subject # _____ Observer _____

In class _____
Video _____
Other _____

I	II	III	IV	V	VI	VII	VIII	IX
Context	Coding Signal	Activity	Motion $M, M_{T,A}, {}_{M,B,P}$ Pause P Vision $V, V_{T,A}$	Stance (✓)	Facial (✓)	Precise-ness 1,2,3	Physical Display of Emphasis 1,2,3	Comments

DIRECTIONS FOR USING THE INVOLVEMENT CODING SHEET

I. Materials needed to code nonverbal behaviors that appear to be related to involvement:

A. Coding sheet

B. Involvement Instrument which includes Category Definitions or Descriptions and Examples.

C. Cassette tape recorder and tape on which sequential numbers from one through forty are recorded at ten-second intervals.

D. Directions and the attached Figure A.

NOTE: 1) When a term is underlined on the direction sheet, please refer to the category definitions for its meaning and explanation of its use.

2) Whenever column numbers are cited, refer to Figure A.

II. Step-by-step Directions:

A. Before beginning to record, observe the setting and the person to be observed for approximately 5 to 15 minutes.

B. Provide the required information in the appropriate blanks at the top of the coding sheet.

C. Describe the Context in Column I.

D. Select on the cassette tape the number with which you wish to start coding and appropriately number the blocks in Column II on the coding sheet.

E. In Column III describe the Activity in which the person being observed is engaged. Each time a new Activity is observed, describe it in Column III. If an Alternate Activity is observed, place brackets ([ ]) in the Activity column (Column III) and do not code in any other column. When the original Activity is resumed or a new Activity begun, describe it in Column III and code accompanying behaviors in the appropriate columns. It is important to record in the Activity column, along with a basic description of the Activity, who in addition to the observee is involved and who appears to be taking the initiative in directing the activity.

F. Record Motions (M), Vision (V), and Pauses (P) in Column IV with the appropriate coding symbol and accompanying subscript(s). Do not record REPEATED Motions or more than one sucessive M_A, M_{T_M}, M_{T_P}, or M_{T_B} in one ten-second interval unless the Motion is interrupted by a P or an observed change in the Motion subscript. For example, if one M_{T_B} if FOLLOWED by a different M_{T_B}, only record one M_{T_B}. However, if an M_{T_B} is followed by a P, and then the same M_{T_B} occurs again, it would be recorded as follows: M_{T_B} P M_{T_B}

The same rule holds for REPEATED Visions (V).

Record SIMULTANEOUS behaviors one next to the other in a horizontal line. For example, if Vision-on-tak (V_T) occurred simultaneously with a Motion-on-task toward materials (M_{T_M}), the coding would appear as V_T, M_{T_M} (See first Motion block in Figure A.) When a new Motion (M), Vision (V), and/or Pause (P) is observed, begin coding on a new horizontal line. Accordingly, there may be more than one horizontal line recorded in any ten-second interval. (See Coding block #11, Column IV in Figure A.)

When the subject's eyes cannot be seen directly, but from the head and body position and any other relevant cues, one can infer that the gaze is either on or off task, record the observation in Column IV and write V-I (I refers to inference) in the corresponding Comment column (Column IX).

If the observer desires, Vision-on-task (V_T) may be coded using additional subscripts to indicate Vision-on-task-toward-material (V_{T_M}) or Vision-on-task-toward-person(s) (V_{T_P}). Caution is advised in coding this information because it is highly judgmental.

G. Code Stance with a check (✓) in Column V whenever a change in Stance is observed.

H. Code any change in Facial expression with a check (✓) in Column VI.

I. Rate Preciseness of movements in Column VII using a 1, 2, or 3, to designate a low, moderate, or high rating. (The rating judgment is made by comparing the subject's observed behavior with his own behavior over a period of time.)

J. In Column VIII rate Physical Display of Emphasis with either a 1, 2, or 3 to designate a low, moderate, or high rating. (The basis for rating is the observed person's behavior compared with his behavior over time.)

K. In Comments (Column IX), record any inferences made as they correspond to Vision. Also write any additional comments, reactions, or helpful suggestions. If not able to code a behavior, make note of that fact in the Comments column. For example, if the person being observed is out of sight or if the observer's vision is blocked, note this in Column IX.

Groundrules

1. Record for eight, ten-second intervals then break for a self- or group-determined time period. During this time, additional notes may be made in the Context and Comments columns.

2. When not sure of a coding or rating, code or rate in the appropriate column if possible. In addition, record the symbol followed by an I in the Comment column. This indicates a high inference.

3. Make every effort to code from the observee's perspective.

Sample entries--
Not a complete recording

Coding Sheet
Nonverbal Indicators of Involvement

Date 5/14/75 Time 10:05 Subject # 64 Observer done

In class _____
Video _____
Other V Beath

I	II	III	IV	V	VI	VII	VIII	IX
Context	Coding Signal	Activity	Motion M, M_T, A, M, B, P Pause P Vision V, V_T, A	Stance (✓)	Facial (✓)	Preciseness 1,2,3	Physical Display of Emphasis 1,2,3	Comments
4- and 5-year old group	5	Child pointing at equal. child-directed	V_T M_{TM}			2	2	
Adult in a facilitative role with minimal direction	6	solitary play. Another child standing near-	V_A		✓			furrowed brow and curled nose looked away V-T
Children in various interest areas moving freely	7	by watching. [ ]	—	—	-	-	-	—
	8					3	3	doing detailed work on corner of paper
	9			✓				
	10	—	—	-	-	-	-	child is out of sight
	11		V_{TM} M_{TM} V_{TB} M_{TP}					
	12							

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CHAPTER SIX

EXPANDING OBSERVATIONAL PROWESS

The range of instruments related to decision, communication, and involvement just presented is but an introduction to the possibilities for generating information about an individual's interactions with others and with materials. The reader is encouraged to try the instruments in their totality or to select categories as the problem dictates. Categories not dealt with in the previous sections can be used and different combinations tried.

In this final chapter the following areas are briefly discussed: Developing an instrument, increasing skill and sophistication in observing, verifying observational data, and utilizing instruments in varied settings. The reader is encouraged to try these suggestions, revise them, and move beyond them.

Developing an Instrument

Knowing how an instrument has been developed provides a basis for understanding the nature and potential of the instrument. In addition, knowing the processes involved enables one to develop a specific instrument if an appropriate one is not available to explore a question.[14] In brief, the

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[14] For more thorough descriptions of how instruments were developed, see Jessie A. Roderick with Joan Moyer and Ruth Spodak, Nonverbal Behavior of Young Children as it Relates to Their Decision Making: A Report of Research Findings, Monograph Number 5, 1971 and Mary Lou Anderson, Touching: Communication During a Quiet Activity, Occasional Paper Number Eleven, 1972.

steps followed are:

Identifying a focus for observing such as nonverbal behavior.

Recording in diary-fashion nonverbal behaviors occurring in the classroom setting.

Deriving categories or groupings by subjecting the diary-fashion narratives to content analysis.

Designing coding or tally sheets for use with the categories or groupings.

Testing and revising the category descriptions and coding sheets.

Establishing inter-observer agreement.

Developing training protocols to familiarize observers with instrument.[15]

Increasing Skill and Sophistication in Observing

With some instruments, the focus for observing may be broadened to include two or more persons (observees) interacting in a specific context or setting. In addition to increasing the number of persons observed, more minute aspects of behavior such as the degree of preciseness of motions may be examined. Under these circumstances, it is usually necessary to engage more than one person in observing and recording the interactions as they occur. If videotapes or movies are used to code behaviors, the tapes or movies may be run several times. One or more persons can code designated aspects of behavior each time the segment of tape is viewed.

It is also possible for two or more coders to use more than one instrument during an observation provided the instruments complement each other in terms of procedures and the kinds of data generated. At times it may be advantageous to select categories from several instruments. Again,

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[15] Jessie A. Roderick, The Involvement Instrument, Occasional Paper Number Fifteen, 1975.

care must be taken to insure that purposes of the instrument, the descriptive material, and coding directions do not conflict.

Procedures which make it possible for an observer to organize, summarize, and display data quickly and clearly are helpful in readily identifying significant aspects of the data and in communicating findings. Such procedures can vary from a simple tally sheet to more complex matrices and continuous time lines where two or more variables are coded and plotted simultaneously. An example of a less complex means of summarizing as one observes might look like this.[16]

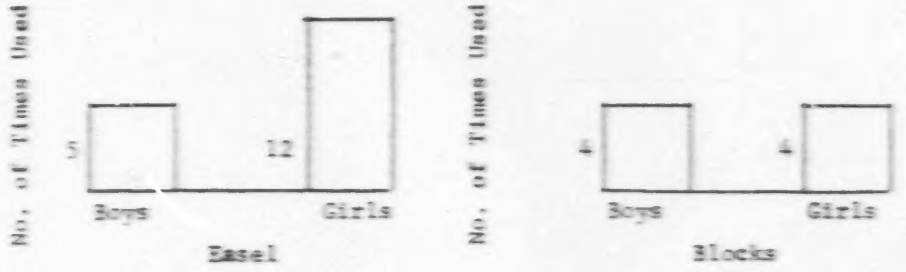
Use of Activity Areas

Child	Easel	Blocks	Activity House Play	Wood Working	Total
Boy 1	II		I	III	6
Boy 2		III			3
Boy 3	III	I	III	III	10
Total Boys	5	4	4	6	19
Girl 1	IIII	I			5
Girl 2	III	II	II	III	10
Girl 3	IIII	I	I	III	10
Total Girls	12	4	3	6	25
TOTAL-- Boys and Girls	17	8	7	12	44

[16] This sample is derived from a tally sheet devised by Cathy Gilliland, teacher in the Center for Young Children.

By inspecting the columns and rows, one can get an idea of the number of times individual boys or girls as well as boys and girls as a group frequent the various activities. Completing the Total columns provides a quick means of summarizing the data. For example, Boy 3 engaged in more activities than did Boy 1, or Boy 2. As a group, girls engaged in more activities than the boys, and as a total group, the boys and girls engaged in 44 activities.

The above totals can be displayed in histogram form to present a graphic summary in the following manner.

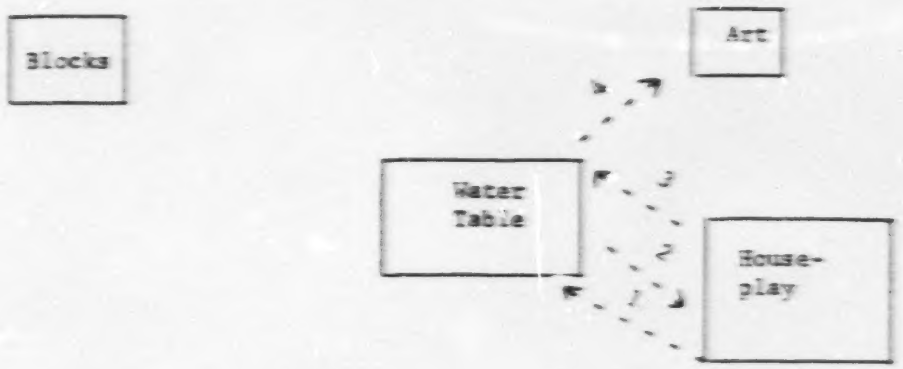


In exploring another question, a picture or diagram can be drawn to illustrate the movement of one or more persons from place to place within a setting. This would provide a pictorial representation of use of space as well as the sequence in which movements occurred. An example of this follows.

Diagram of Movements in a Classroom

Child _____ Time Observed _____ to _____

Date _____



- - - - -) = direction of movement
numerals (1-4 . .) sequence of movements

When reciprocal categories such as those in the CODE instrument are employed, single digit numerals can be assigned to categories coded as teacher behaviors and two digit numerals to learner behaviors. For instance, a 1 can designate teacher questioning and an 11 student questioning.[17]

Even if a category system is not designed to be reciprocal, it might be possible to make it reciprocal by numbering the categories as above. The assumption is that each category applies to both teacher and learner behavior.

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17 This basic procedure is presented in Richard Ober, "The Reciprocal Category System," Journal of Research and Development in Education, IV, No. 1 (Fall 1970), pp. 34-51.

Subscripting a category symbol such as done in the Involvement Instrument is one way of coding information in a more compact form. This procedure has the effect of combining two or more categories into one coding symbol. For example, referring again to the Involvement Instrument, a Motion-on-task toward materials could be tallied in three separate columns or combined into a letter and two subscripts (M_{1y}) and tallied in one column. The subscripting is a short-hand method of coding multiple aspects of behavior.

A person's skill and sophistication in observing can also be increased by learning to apply more complex analysis procedures to data when appropriate. The term more complex procedures as employed here refers to procedures that move beyond initial inspection or simple examination and organization of the data obtained.

Observational procedures such as the ones presented in this paper usually yield data or information in the form of frequency counts. Examples of frequency counts are the number of touching behaviors or smiles exhibited by persons or the number of activities engaged in. Tallies or codings may be totaled to summarize the data. The totals may then be converted to percentages. Subsequently, totals or percentages can be ranked from high to low giving some indication of the position of each in relation to the others. Change in individual scores over time can also be arrived at by determining the amount of increase or decrease from one situation or observation to another.

If further analysis of frequency distribution data is desired, a chi square (X^2) can be computed.[18] This statistical test compares the expected frequencies with the observed frequencies. If an investigator wants to

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[18] For information on this statistical test and others, see C. Mitchell Dayton and Clayton L. Stunkard, Statistics for Problem Solving, New York: McGraw-Hill, Inc., 1971; and Fred N. Kerlinger, Foundations of Behavioral Research, Second Edition, New York: Holt, Rinehart and Winston, Inc., 1973.

compare means or average scores of two or more groups then a t-test or an extension of it, analysis of variance (ANOVA), can be calculated.

Of vital concern in selecting appropriate statistical tests is whether there is a match between the test and the purpose of the investigation. An understanding of the kind of information that applying specific tests to data yields is critical to achieving this match.

In summary, the degree of sophistication in using instruments and data derived from them varies with individuals, the purposes for which information is generated, and the materials and equipment available. Use of the computer in analyzing and generating information obtained from large populations adds another dimension to this concern. In any event, the persons responsible for planning, implementing, and evaluating in the classroom need to be aware of necessary skills and them as the problems they explore dictate.

Verifying Observational Information

The values of observing persons as they engage in interactions in natural settings are many. However, observational data should be supplemented as well as verified by other means of generating information.

Discussion of an interaction either while persons are engaging in it or after they have completed it can provide insight into how the person doing the interacting views or perceives the experience. Questions related to the categories on an observational instrument can elicit responses which provide checks on the observer's perception of what occurred.

Another way of checking observations is to record or tape the verbal utterances that occur during the interaction. After observations are completed,

the tapes can be played and compared with the data on the coding sheet. If coding is of nonverbal behavior, congruency between verbal and nonverbal aspects of communication can be examined.

Written questionnaires which ask a person to reflect on an interaction with other person(s) or materials is still another way of checking or verifying on-the-spot observations. The person observed also gains from responding to written or spoken questions. As an individual thinks about her/his own experience, he/she gains insight into what happened, why it might have happened that way, how the experience influences his/her thinking and acting, and how he/she might revise behavior if desired.

In this section we have suggested techniques for verifying observations. Conversely, observation can also be used to verify interviews, self-reports, case studies, and other similar techniques.

Contexts and Observational Instruments

Observational instruments and guides such as those presented in this paper can be used in many different settings. Instruments and guides can be used in teacher education methods classes, practicums in the schools, and in courses in child development to name a few. They are of particular help in providing objective feedback to student teachers and other persons working in the student teaching program. At the graduate level, teachers, administrators, curriculum workers, and researchers can use observational instruments to explore problems specific to their present positions or positions for which they are preparing. The dynamics of staff meetings, two-way conferences, and other gatherings of persons can be analyzed to increase our knowledge of how persons function in difficult settings. An individual might wish to study the context or setting of a whole school and then focus on certain communicative or decision-making behaviors within that

setting.

Developing skill in observing can be a major part of the preparatory experiences for paraprofessionals of many orientations. Persons working in day-care centers, community centers, hospitals, homes for the aged, and other helping agencies such as half-way houses can upgrade their skills of working and planning with others by becoming skilled in observing.

The possibilities are unlimited. Our hope is that persons in many different helping professions will try some of the suggested techniques, revise them accordingly, and develop new ones when necessary.

APPENDIX

Categories for the Observation of Decision-Making Elements

(CODE)

(A Reciprocal Interaction Analysis System)

APPENDIX

Figure 14. Categories for the Observation of Decision-Making Elements

(CODE)

(A Reciprocal Interaction Analysis System)

Categories	Definitions	Illustrative Behaviors
1. Attending	This category indicates attention or inattention or request for attention by the teacher or child.	
a) Listening-Watching	One or more actors focus on speech or activities by apparent listening-looking.	The teacher is sitting with children at the clay table observing their work and listening to their conversation about their objects. Shirley sits and watches the teacher and Dick sorting puzzle pieces.
b) Not Responding	b) The teacher or child does not respond to a request, suggestion, or direction.	(Joyce: "Teacher, help me with my boots!) The teacher does not answer. (Teacher: "What day is it today?") Ed walks away.
c) Responding-Indicating Delay	c) A response is made by an actor that indicates his action will be postponed.	(Colleen: "Please come and help me with the paints!") Teacher: "I'll be there as soon as I finish helping Sada." (Teacher: "Alice, come help us slice the vegetables.") Alice: "I'll be there in a few minutes."
d) Requesting	d) The teacher or child solicits the	Teacher: "Frank!"

CODE (continued)

Categories	Definitions	Illustrative Behaviors
Attention	attention of another.	Tom: "Hey!" (To the teacher)
2. Focusing on a Problem	This category is concerned with the recognition of a problem or problem situation by the teacher or child.	
a) Identifying a Problem	a) One or more actors indicate a problem situation	Teacher: "You know what the problem is? I haven't got enough cartons for everybody if you use two, Pat." Sarah puts her hand over her mouth and points to the water on the floor.
b) Requesting Identification of a Problem	b) The teacher or child asks another to identify a problem or problem situation.	Teacher: "Michael, what's the matter? Why are you crying?" Donna: "Teacher, what's wrong with Mary?"
3. Assisting	The teacher or child offers, provides, or requests help or solace (human or material resources) during interaction.	
a) Offering Assistance or Comfort	a) An actor offers assistance or comfort to another person.	Teacher: "Bruce, I think Jesse can help you with those wheels; she fixed them yesterday." Mary: "May I help put out the napkins?"
b) Giving Assistance or Comfort	b) An actor provides assistance and/or comfort to another.	The teacher helps Susan who is struggling with her boot. Liz crawls under table and picks up paper

CODE (continued)

Categories	Definitions	Illustrative Behaviors
		the teacher dropped.
c) Requesting Assistance or Comfort	c) An actor solicits assistance or comfort from another.	Teacher: "I need help, the mural is falling down!" Mike runs to the teacher crying after he has accidentally broken his plaster valentine.
4. Informing	This category depicts statements of facts or personal beliefs (or lack of either) by the teacher or child.	
a) Stating Facts or Opinions	a) An actor relates factual information or personal feelings or beliefs.	Teacher: "We weighed the guinea pig and the hamster. The guinea pig weighed more." Marion: "I like strawberry jello."
b) Requesting Facts or Opinions	b) The teacher or child solicits factual information or personal feelings/beliefs from another.	Teacher: "Do you think we could have beans and franks for snack?" Lyn: "Are we going on our trip tomorrow?"
c) Not Knowing	c) An actor does not have an answer or opinion to a question directed to him.	(Joe: "Teacher, do you think I've put enough water in the play dough?") Teacher: Shrugs shoulders, raises hands slightly indicating that she does not know. (Teacher: "Lynn, where's the hammer?") Lynn: "I don't know."

Categories	Definitions	Illustrative Behaviors
5. Extending	These are statements or questions by the teacher or child that request or provide additional thought, clarification, or explanation. These remarks usually follow statements coded in other categories.	
a) Elaborating	a) The teacher or child adds information, clarifies, or explains previous comments or actions.	(Barbara: "We built this house for a Mommy, a Daddy and two children.") Shirley: "Yep, it's got three bedrooms." (Teacher: "What else do you remember about the film we saw yesterday?") Rosemarie: The little boy was sad when his puppy got lost."
b) Requesting Elaboration	b) An actor solicits further information, clarification or explanation.	Teacher: "Who else can tell us more about that?" Teacher: Beckons with hands for further comments. David: "(You said the cake didn't rise.) 'Not rise'? What does that mean?"
6. Prescribing and Describing	This category includes giving and requesting a course(s) of thought or action by the teacher or child.	
a) Suggesting a Course of Thought or Action	a) An actor recommends one thought or action. Suggesting statements usually include such words as	Teacher: "Perhaps we should think about our invitations first." Billy: "Let's make a snowman today."

CODE (continued)

Categories	Definitions	Illustrative Behaviors
	"perhaps", "might", "suppose", etc.	
b) Suggesting Alternative Courses of Thought or Action	b) An actor proposes more than one thought or action. Imperative statements by children may be coded in this sub-category when they follow requests for suggestions.	Teacher: "Leslie, you might use blocks or cardboard boxes to build your apartment house." Jim: "We could put our cookies in bags or in boxes."
c) Directing a Course(s) of Thought or Action	c) The teacher or child commands another to follow a prescribed thought or action. Teacher statements using imperatives are always coded in this sub-category.	Teacher: (It's clean-up time.) "Pete, pick up the blocks or sweep up the sawdust." Gordon: "Don't do that, Jim!"
d) Requesting a Possible Course(s) of Thought or Action	d) An actor solicits one or more possible suggestions from another/ others.	Teacher: "What are some different ways that you can think of to make our valentines?" Harvey: "What do you think we can do to make Betty feel better?"
7. Predicting	The teacher or child states or requests statements of future consequences and/or outcomes. This behavior goes beyond stating opinions (which are concerned with past and present thoughts and actions).	
a) Stating Predictions	a) An actor foretells the consequences or outcomes of ideas or	Teacher: "I think if you take Sandy's pocketbook, she might be angry."

Categories	Definitions	Illustrative Behaviors
	actions.	(Teacher: "What will happen if we put the cookie in the water?") Hattie: "It will break into crumbs."
b) Requesting Predictions	b) An actor solicits the hypothesis/ hypotheses of others.	Teacher: "How do you think Carol will feel if you eat her cupcake?" Clarence: "What will happen if I put a piece of wool in the water?"
8. Intending-Choosing	This category includes statements by the teacher or child of intentions. It also encompasses actions resulting from intentions, suggestions, or directions.	
a) Stating Intent	a) The teacher or child states his intention to select or not select a thought or action.	Teacher: "I need to mix paints now." Paul: "I don't want to help make the stew."
b) Requesting Intent	b) An actor solicits the intention or plan of another.	Teacher: "What is it that you want to do, Tom?" Diane: "What are you going to do outside today, Teacher?"
c) Following Through	c) The teacher or child acts on his stated or unstated intent, or on the suggestions or directions of another/ others.	(Olga: "Teacher, put this picture over the rabbit hutch!") The teacher tapes the picture over the hutch. (Jimmy: "I'm going to put this blotter

Categories	Definitions	Illustrative Behaviors
		in the water to see if it floats!") Jimmy drops the blotter in the water. David drops the blotter in the water. (Intent implicit - no statement made before the action.)
d) Not Following Through	d) The teacher or child does not act on his own intent or the suggestion or direction of another. (If he is responding to a suggestion or direction, he declares that he does not want to act.)	(Bobby: "Teacher, tie my shoes!") Teacher: "I'm sorry Bobby, that's your job!" (Steve has said, "I want to paint.") Steve does not begin to paint.
9. Appraising	This category includes all teacher or child assessments of thought and action of self and others.	
a) Approving	a) An actor confirms or approves his or others feelings, thoughts, or actions. Non-verbal actions such as a nod accompanied by a smile and/or gesture indicating approval are coded here.	Teacher: "You're right, Ann!" Marnie: "That's a beautiful painting, Jennie Lynn."
b) Accepting	b) This sub-category indicates a passive or neutral appraisal of feelings, thoughts, or actions. Repeating the statement of another, or describing what another is doing or has	(Richard: "I don't like the noise in in here.") Teacher: "Richard doesn't like it to be so noisy." (Michele is feeding the baby mice.)

Categories	Definitions	Illustrative Behaviors
	done, without value judgment is coded here. Behaviors such as a nod or value-lacking utterance ("uh-huh", "okay", etc.) are included if no specific evaluation is perceived.	Sherry: "Michele is taking care of the baby mice."
c) Disapproving	c) An actor disconfirms or disapproves his or other's feelings, thoughts, or actions. The sub-category may include negative head-shaking, frowning, hitting, verbal utterances such as "yuk".	Teacher: "I am angry when people shout so loudly." Kent: "That's not true, Jill."
d) Requesting Appraisal	d) The teacher or child solicits the assessment of another/others concerning their feelings, thoughts, or actions.	Teacher: "Why did you choose the red and white material for your curtains, Amy?" Dorothy: "Teacher, how do you like my painting?"
10. Mystifying	These are behaviors by teacher or child that cannot be recorded in the foregoing categories.	Unanticipated behavior.
a) Interacting Behavior that Cannot be Seen or Heard	a) These behaviors occur in an interactive situation, but cannot be coded in categories 1-9 because they are inaudible or out of the observer's vision. This sub-category includes incomplete statements that do not convey meaning. Nonsensical comments	John: "The paint . . ." The Teacher, Amy and Joe walked behind the screen.

CODE (continued)

Categories	Definitions	Illustrative Behaviors
	are also coded here.	
b) Interacting Behavior that Cannot be Coded.	b) These behaviors occur in an interactive situation but cannot be coded in categories 1-10a.	

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